

# THE FINANCIAL SERVICES OF APPLE, GOOGLE AND OTHER BIG TECH: A DANGEROUSLY GOOD DEAL

## How the EU should respond

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# ABSTRACT

- **Big tech companies like Apple and Google have been steadily expanding into Europe’s financial services sector.** They are doing so as providers of both critical IT services for banks and financial services for consumers. In the EU, they play a particularly large role in the digital wallet market (e.g. Apple Pay, Google Pay etc.). The IT services provided by tech giants, like the cloud offerings from Amazon Web Services (AWS) and Microsoft Azure, are widely used in the European financial services sector.
- **Big techs benefit disproportionately from their offerings in the financial services sector.** For one, the provision of financial services strengthens the big tech firm’s core business as well as its financial services division. Furthermore, these services also allow big techs to control critical infrastructure, while generating huge profits with relatively little effort and minimal risk to the company.
- **The entry of big techs into the European financial services sector poses numerous risks,** particularly to financial stability, fair competition, consumer and data protection and Europe’s strategic autonomy and democracies. The current framework of regulation and supervision in all of these areas is inadequate for effectively addressing these risks. The challenges include not only the limited mandates of the individual authorities, but also the overwhelming lack of supervisory cooperation in practice – often in spite of existing legal competences.
- **A European response to big tech companies in the financial services sector will require:**
  - **More comprehensive and coordinated supervision of big tech companies in the financial services sector, as well as adapted market conditions** that promote fair competition and reduce market concentration. This would involve more cooperation between the supervisory authorities for competition, data protection and financial services, as well as the rigorous enforcement of the applicable competition rules and the creation of public-sector alternatives, such as the digital euro, to increase competition.
  - **In addition, the structure of big tech companies should be simplified through a clear separation of financial services from non-financial activities.** The first step would involve the creation of a financial services division that is operationally separate from the rest of the group. If the risks persist and market concentration continues to increase, an ownership unbundling of the financial services division from the rest of the big tech company should be made possible.

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# 1. INTRODUCTION

**Big techs have already become too large and too powerful.** The technology giants Apple, Amazon, Meta (formerly Facebook), Alphabet (Google), Microsoft, Tencent (WeChat) and Alibaba (Alipay) rank among the best-known and most influential companies in the world.<sup>1</sup> The US's "Big Five"<sup>2</sup> account for roughly a quarter of the S&P 500, the most important US equity index.<sup>3</sup> These tech behemoths are growing at an unfathomable rate and actively working to achieve dominant market positions – at times even through illegal means. As a result, competition regulators on both sides of the Atlantic have been taking action to ensure that big techs are held accountable: In a series of competition proceedings before European and US authorities, Apple, Google, Meta and Amazon have been accused of anti-competitive behaviour, and Google was even found to have an illegal monopoly.<sup>4</sup> In this context, the authorities are, for the first time in a long time, considering imposing structural remedies, meaning an unbundling of business activities.<sup>5</sup>

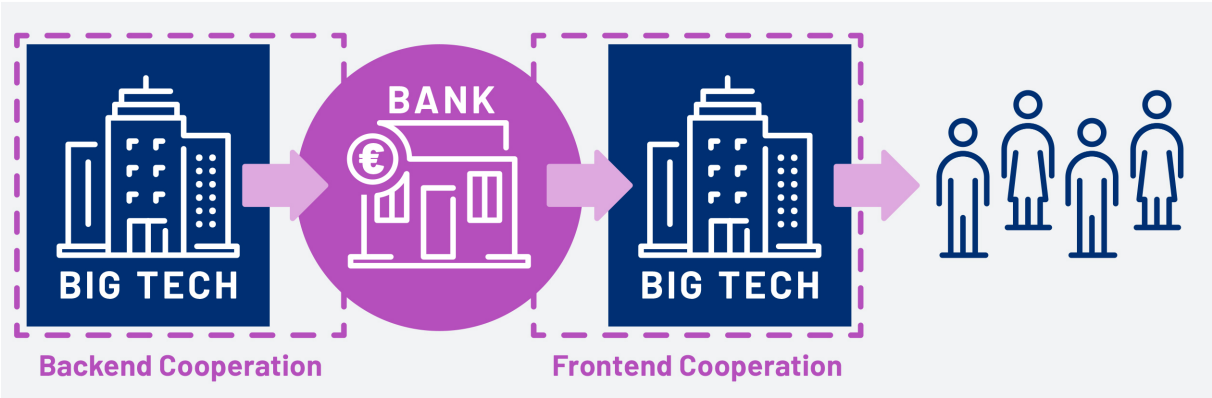
**The strategic goal of big tech companies is to build extensive digital ecosystems.** They are constantly expanding their portfolio of products and services to complement their core competencies of e-commerce, social networks, hardware and software. An issue that has garnered a lot of attention in recent years is the risk that the future of artificial intelligence (AI) could be shaped and controlled by only a handful of powerful tech giants. They seem to be the only companies with the necessary resources for advancing the development of highly complex AI applications: e.g. computing power, massive amounts of data (big data), technical expertise and financial capital.<sup>6</sup> However, under the radar of society, big techs are also entering into the financial services sector, where they could become systemically important financial market players.

**Big tech companies have long since become central platforms of economic and social activities in Europe.** The CrowdStrike outage in July 2024 increased global awareness of the systemic importance of large technology companies in various areas of life and the economy. The software error that triggered the shutdown of 8.5 million Microsoft Windows operating systems impacted the business operations of supermarkets, airports, hospitals and ATMs.<sup>7</sup> Today, big tech companies are integral to the functioning of practically all aspects of our society and economy. Their structural power and their influence on politics and society are nearly impossible to keep in check at the national level. And these companies are not subject to any democratic control or legitimation when they assume central positions of power in our society.<sup>8</sup>

## 2. BIG TECH’S DOUBLE ENTRY INTO FINANCE

The entry of big tech companies into the financial services sector has gone largely unnoticed. They are positioning themselves in the financial sector through two main entry points, the front end and the back end (see Fig. 1). For one, they are providers of critical IT services for financial institutions: e.g. risk management, data storage, AI assistants, data analysis and cloud computing services (e.g. Amazon Web Services, AWS, and Microsoft Azure). **Back-end services** like these are essential, as particularly the smaller financial institutions do not have sufficient resources for in-house systems. In addition, tech giants are beginning to offer important financial services for consumers, so-called **front-end services**. These include digital wallets, like Google Pay, Meta Pay, Apple Pay and Amazon Pay, as well as other payment, lending, deposit (bank accounts), insurance and asset management (investment) services. For these services, big tech companies merely provide the customer interface and rarely use their own systems to instruct, clear and settle transactions. Normally, big techs are able to offer banking products and services by teaming up with licenced financial institutions. In the US, for example, Apple’s service portfolio includes a savings account called “Apple Savings” that is offered and serviced by the banking giant Goldman Sachs.<sup>9</sup> Partnerships like these increase the complexity of the value chain for financial services.<sup>10</sup> At the same time, some big tech companies apply for their own licences and, in these cases, control the entire service chain (as payment service provider, electronic money institution etc.).<sup>11</sup> Table 1 offers an overview of the big tech companies with their respective core business areas, financial services and technology services for the financial services sector.<sup>12</sup>

Figure 1: Big Tech cooperation in finance



Source: Bank for International Settlements, FSI Insights No. 60, last accessed on 7 February 2025.

The financial services offered by the big tech companies in Europe are still relatively limited in scope compared to the offerings in their home countries of the US and China (see Table 1). In the EU, the use of back-end technology services by financial services providers is widespread. In 2020, approx. 70 per cent of the thirty largest banks supervised by the Bank of England used

technology services provided by large companies like Amazon and Microsoft.<sup>13</sup> These figures are most likely similar for the EU. The front-end services offered in the EU, the majority of which are provided through “overlay systems” (relying on partnerships with banks or payment service providers), include primarily payment solutions and specialised credit<sup>14</sup> and insurance products.<sup>15</sup> Digital wallets, such as Apple Pay and Google Pay, are popular payment options in the EU. Outside of the EU, big tech companies have ventured even further into financial services. The wider range of offerings outside of Europe is primarily due to the fact that big techs in China and the US are operating in their domestic markets. For example, Tencent and Alipay, a subsidiary of the Chinese tech giant Alibaba, account for more than 90 per cent of all mobile payments made in China.<sup>16</sup>

**Table 1: Big Techs’ financial and IT services**

	Core Business		Financial Services					Technology Services	
	E-commerce	Digital Services <sup>1</sup>	Payments	Deposits	Loans <sup>2</sup>	Insurance	Investment	Cloud Services <sup>3</sup>	AI Services <sup>4</sup>
<i>In the EU</i>									
Alibaba									
Tencent									
Apple									
Amazon									
Alphabet									
Meta									
Microsoft									
<i>Outside the EU</i>									
Alibaba									
Tencent									
Apple									
Amazon									
Alphabet									
Meta									
Microsoft									

<sup>1</sup> Digital services include social networks, mobility and driving services, deliveries and streaming services  
<sup>2</sup> E.g. credit services such as buy-now-pay-later services or financing of own products (e.g. MacBook, iPhone at Apple, etc.)  
<sup>3</sup> Cloud services include cloud storage and cloud computing solutions relevant to the financial sector  
<sup>4</sup> AI services include AI applications relevant to the financial sector

### 3. BIG TECH'S STRATEGY IN FINANCE: MINIMUM EFFORT, MAXIMUM GAIN

**Big techs are not banks. They are technology companies focused on strengthening their digital ecosystems.** The provision of financial services benefits the entire company disproportionately and in multiple ways:

- **The provision of financial services strengthens the big tech firm's core business as well as its financial services division.** It can use resources and existing structures from its core business for optimising, cross-subsidising and personalising financial products. These resources can include vast amounts of data from e-commerce and social media platforms. Big techs' large installed customer bases enable them to quickly gain scale in new financial services. At the same time, network effects increase the attractiveness of the platforms, as the more users a platform has, the more attractive it is for new customers and services. Accordingly, the integration of financial services, e.g. into the check-out stage of e-commerce transactions, can improve user experience, strengthen customer loyalty and drive growth. At the same time, big techs use the financial and transaction data from their financial offerings to gain valuable knowledge for their entire service portfolio. This data, often more valuable than direct revenues,<sup>17</sup> can be used for the development of all types of new products and can strengthen the platforms overall.<sup>18,19</sup> The significant role played by financial services and their associated data in a company's digital ecosystem is also illustrated by Elon Musk's plan to transform X, the social media platform formerly known as Twitter, into an "everything app" starting with an X payment service.<sup>20</sup>
- **Through their role as infrastructure providers in the financial system, tech giants themselves become critical infrastructure.**<sup>21</sup> The "engine room" of European financial institutions and financial services providers is largely being outsourced to big tech, with its back-end services. The market for cloud computing and AI services is already highly concentrated. Roughly 70 per cent of the global cloud market is controlled by four tech giants (Amazon AWS, Microsoft Azure, Google Cloud and Alibaba Cloud).<sup>22</sup> The big techs also dominate the market for AI services, as they themselves own, finance or provide infrastructure for the large providers in the market.<sup>23</sup> This makes the financial services sector critically dependent on the services of the tech companies and strengthens their central position.

- **The provision of financial services generates huge profits for big tech companies while requiring minimal effort and presenting low risk.** In terms of the technology required, the integration of new financial services into existing platforms is relatively simple, and many of the financial services offered are based on relatively uncomplicated technological solutions.<sup>24</sup> This also applies to digital wallets and instalment loans. The financial risks, as well as the regulatory and legal requirements, are outsourced through partnerships with licenced and regulated financial institutions, payment service providers and insurers,<sup>25</sup> while the big tech companies focus on the provision of user-friendly interfaces.<sup>26</sup> Some examples are digital wallets like Apple Pay or Google Pay in the EU: They convert the user's debit or credit card into a digital format ("tokenisation"). As a result, transactions can be made quickly and easily using a smartphone. The payments are processed through the existing infrastructures of the cooperating banks and credit card companies.

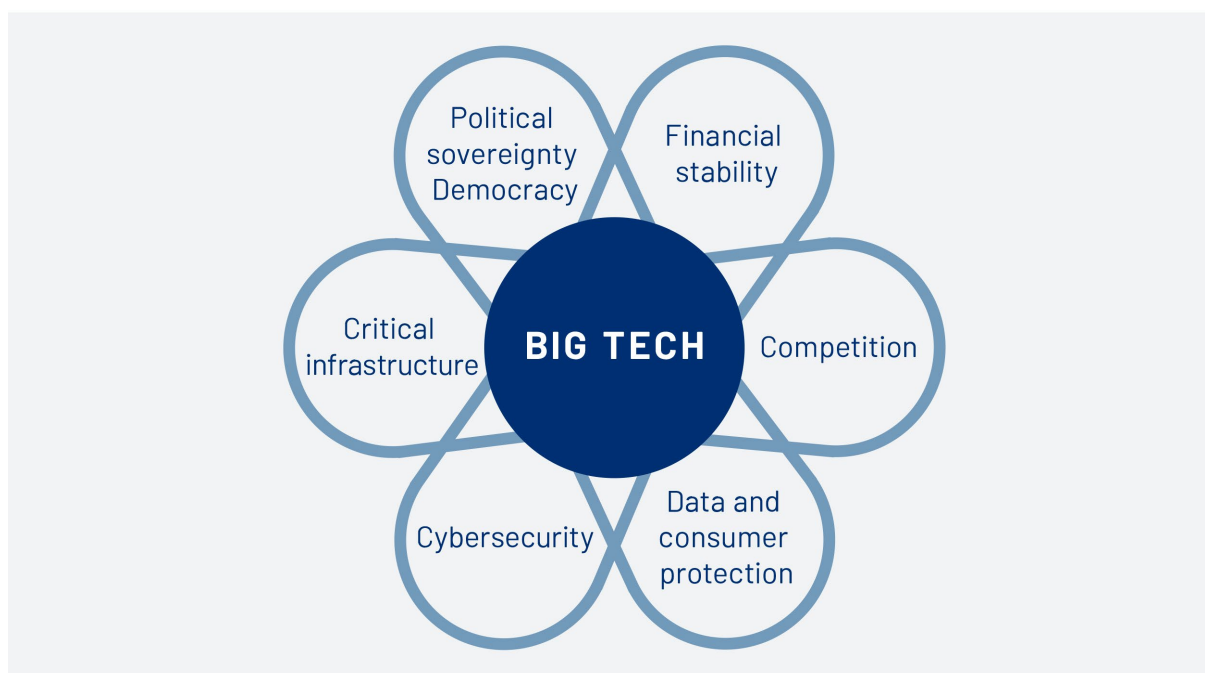
**For big techs, the provision of financial and IT services for the financial sector represents a good deal.** In particular, financial services for consumers are relatively easy to implement in terms of technical and legal considerations, e.g. through partnerships. Big tech companies already have the necessary technological infrastructure, digital platforms and access to customers. By providing financial services, tech giants are able to collect additional data and fees and to strengthen customer engagement and loyalty through even more extensive platforms. Not only IT services for the financial sector, but also financial services are helping big techs reap multiple benefits simultaneously and consolidate their position as the dominant force in the digital ecosystem.

## **4. RISKS IN THE BLIND SPOT OF SUPERVISION AND THE ASSOCIATED REGULATIONS**

**For Europe, the risks posed by the financial services strategies of the big techs apply to several areas of social relevance.** These include financial stability, fair competition, consumer and data protection, cybersecurity and the protection of Europe's political sovereignty and critical infrastructure (see Fig. 2). **However, the current framework of regulation and supervision in all of these areas is inadequate for effectively addressing these risks.**



**Figure 2:** Key Risks of Big Tech Financial Services



## 4.1. Risks to financial stability

**Owing to the fact that the types of risks posed by big tech’s financial and IT services differ greatly from those of conventional banks, traditional financial supervision is largely ineffective.** Financial supervision is essential for not only ensuring stability and confidence in financial markets, but also protecting consumers and minimising systemic risks. However, the traditional supervisory approach is largely ineffective in the supervision of big tech companies’ financial services, which are less exposed to credit and liquidity risks and more exposed to operative, reputational and contagion risks.<sup>27</sup> Unfortunately, there are no appropriate regulatory mechanisms in place for addressing these risks. The current regulatory framework for licencing payment service providers and e-money issuers is not designed for the big techs’ broad spectrum of business areas,<sup>28</sup> as it does not sufficiently address the risks associated with the potential for contagion effects from non-financial activities to financial activities and the increasing concentration of power. The complexity of supervision is further increased by the big tech companies’ partnerships with banks and financial services providers (see Fig. 1). And the scope of supervisory mandates is miniscule in comparison with the gigantic scale of the big tech conglomerates: For example, the financial supervisor is only allowed to oversee the subsidiary with the respective licence.<sup>29</sup> This lack of scope can result in large supervisory blind spots in which major risks originating from the company’s unsupervised operations can go undetected, as was seen in the case of Wirecard in 2020.

**The challenges posed to financial stability by big tech and “big finance” are similar: Size, systemic interdependencies and complexity create internal and external contagion risks.**<sup>30</sup>

With big techs, it is the high level of interconnectedness between the financial entity and the core business that makes them so vulnerable: i.e. problems in one area can threaten the stability of the entire group.<sup>31</sup> One example of such contagion was seen in 2021, when Amazon’s AWS system experienced three outages that impacted numerous systems and businesses, including the company’s e-commerce operations.<sup>32</sup> Another problem is that the market for IT infrastructure, such as cloud services for financial institutions, is highly concentrated with a few big tech companies. In the UK alone, 70 per cent of banks and 80 per cent of insurers rely on just two large cloud providers.<sup>33</sup> This situation poses risks to not only IT security, but also compliance with data protection rules and the operational resilience of financial institutions.<sup>34</sup> In 2024, external IT service providers like these were responsible for two thirds of the IT incidents affecting payment service providers in Germany.<sup>35</sup> Amazon’s AWS outages also affected its web service clients, including financial institutions, airline reservation systems, dating apps and streaming platforms.<sup>36</sup> Outages are not the only risks associated with big tech’s IT services: Cyberattacks can also cause massive disruptions to business operations, including those of banks and insurers. The threat of cyberattacks on the providers of IT services exposes their clients and the financial system to significant risks through no fault of the financial and insurance institutions themselves.

**In the EU, the Digital Operational Resilience Act (DORA) has addressed some of the risks associated with outsourced IT services in the financial sector.**<sup>37</sup> This new regulation, which applies to financial institutions and IT service providers, introduces requirements for IT risk management, rules for reporting IT-related incidents and a stronger pan-European oversight framework for IT third-party service providers. These measures represent an important step towards improving the stability of financial services institutions. However, DORA falls short when it comes to addressing the problematic market concentration of external IT service providers, which poses dangerous concentration risks.

## 4.2. Risks to fair competition

**Big tech firms have been under scrutiny for years for the threats they pose to fair competition in numerous sectors – including the financial sector. The existing instruments used by the competition authorities have proved inadequate.** The market power of big techs in other industries drives the success of their financial services: They use their established customer bases, cross-subsidise new financial services from other income and profit from the technologies and know-how of the parent company. These resources, along with the network effects of the platforms, give them clear advantages over traditional and new providers. The competition authorities are facing major challenges. One problem is that they lack insight into

the internal process of the big tech firms. Another is that classic competition regulation is focused on consumer welfare as measured by short-term price effects. This approach fails to consider the tech giants' data-driven growth strategies and their focus on free services for consumers.<sup>38</sup>

**The EU's Digital Markets Act (DMA) is an attempt to adapt competition rules to digital markets.**<sup>39</sup> Targeting large digital platforms, like those of big tech, the DMA introduces rules and obligations while prohibiting certain types of anti-competitive behaviours. Its aim is to prevent the abuse of market power and eliminate the unfair competitive advantages provided by the platforms' broad-based business models. However, the DMA does not include any specific guidelines for addressing big tech's exploitation of competitive advantages in their entry into the financial services sector.

### **4.3. Risks to effective data protection and consumer protection**

**Big tech's violations of data protection and consumer protection laws cannot be adequately addressed owing to the associated supervisory challenges and weak regulatory framework.**

**The collection, analysis and use of data represent the engine of big tech's business model.**

Financial data is particularly valuable for big tech companies, as it offers them in-depth insights into many aspects of consumers' lives. Loopholes in data privacy regulations allow corporations to consolidate this data. Although the Digital Markets Act (DMA)<sup>40</sup> requires the consent of the user (Art. 5(2)), this consent is often obtained by fraudulent means through market power and the use of deceptive website design practices like "dark patterns".<sup>41</sup> Moreover, tech giants take advantage of legal ambiguities, e.g. in the German General Data Protection Regulation (DSGVO), to shift responsibilities for data protection to smaller companies in the value chain.<sup>42</sup> According to the French Data Protection Authority CNIL, some business models, like that of Google Pay, even offer comparatively cheap services in exchange for authorising the use of their payment data for more purposes. This authorisation allows the company "to occupy a strategic place at the heart of the payment data chain and thus enrich their capital with data on each individual"<sup>43</sup> The slow response of the data protection authorities in combination with the lack of transparency in data practices makes supervision more difficult. The compliance reports that have been required in the EU since 2024<sup>44</sup> have not been very effective in enabling supervisory authorities to assess whether the companies are in compliance with their obligations.<sup>45</sup>

## 4.4. Risks to our democracy and political sovereignty

**The dominant tech giants in the financial services sector also threaten European autonomy, in particular with respect to critical infrastructure like payment systems.** The EU is highly dependent on non-European companies, especially in the area of payment systems and IT services like cloud and AI. Open banking regulations<sup>46</sup> aimed at promoting competition between banks and non-bank financial services providers, including payment service providers, make it easier for big tech firms to access financial data and markets.<sup>47</sup> This situation is weakening the EU's strategic autonomy.<sup>48</sup> Thierry Breton, former European Commissioner for the Internal Market, also warned that such dependencies can be used for exerting political pressure.<sup>49</sup> In this sense, European democracies and their processes are made vulnerable because, in times of crisis, these member states would be forced to accept the demands of systemically important tech companies and their respective governments. To protect itself from the dominance of tech giants in the financial services sector, the EU will require decisive European initiatives: not only legislative initiatives for protecting critical infrastructure, e.g. payment and IT systems<sup>50</sup> in the financial sector, but also public-sector projects, such as the introduction of a digital euro<sup>51</sup> for establishing a European payment system.

**In addition to the specific supervisory obstacles mentioned above, the tech giants' "black box" business model in general has proved impenetrable to supervisory scrutiny.** Big tech companies are extremely opaque, their corporate structures are vastly complex, and many of their operations, e.g. through their partnerships, are outside the regulatory parameters. They are not required to adequately disclose much of the information about their internal processes. The public, including supervisory authorities and investors, know very little about how exactly the big tech companies generate revenues and use their data and technology internally.<sup>52</sup> In many respects, it is forced to rely on the goodwill of the big tech firm to share this information. Even the official business reports for the US Securities and Exchange Commission (SEC) (Form 10-K) only require highly aggregated financial statements. For example, Apple hides its Apple Pay revenues in these reports by combining them with its revenues from other services, and its partner banks are contractually obligated to keep this information confidential.<sup>53</sup> As a result, it is impossible to determine which service area is the most profitable. This opacity makes it possible for big tech companies to conceal their market power in certain areas and keep relevant information hidden from the financial, competition and data protection authorities, making supervision very difficult.<sup>54</sup>

**One thing is clear: Big tech's entry into financial services offers tremendous opportunities for the companies themselves – but poses tremendous challenges with respect to their supervision and regulation.** The companies act quickly and boldly and are prepared to take risks, as is illustrated by the motto of Meta founder Mark Zuckerberg: "Move fast and break things."<sup>55</sup> This philosophy also characterises their unforeseeable advance into the financial services

market, which comes with substantial risks:<sup>56</sup> e.g. to consumer protection, financial stability, fair competition and even European sovereignty. In light of their rapid growth and often questionable market power, a regulatory response must be found just as quickly.

## 5. WHAT COULD A EUROPEAN RESPONSE TO BIG TECH IN FINANCE LOOK LIKE?

**Big tech companies wield unprecedented power and, with this power, are increasingly shaping Europe's financial services sector. The EU needs to decide how to respond to this development.** The existing regulatory gaps provide an opportunity to proactively shape the trajectory of future developments, particularly as the big techs made their entry into the European financial services market relatively late. The risks associated with an excessive concentration of power and the possibility that this power could be abused by the big techs are already well known in other segments, e.g. social networks and e-commerce, and have been addressed in part by the Digital Markets Act (DMA). However, the same risks also apply to the financial services sector, where market concentration can also threaten financial stability through a concentration of risks. Owing to the fact that the DMA does not include any specific guidelines for financial services, the big techs' financial services are still being regulated in the same manner as the financial services of other companies. The specific risks posed by big tech firms remain largely unaddressed. These include not only operational but also contagion risks, e.g. between the groups' diverse range of businesses.

**Owing to the fact that big techs can choose from multiple entry points into financial services, the European response will also need to be multi-levelled.** First, the EU will have to adapt its supervisory framework and address its market structure to ensure fair conditions of competition. This is particularly important for safeguarding European autonomy in the sectors with critical infrastructure, such as IT and payment services. Second, the structures of the big tech companies must be directly addressed. A promising approach to risk reduction is a strict segregation of the big tech's financial activities from its other commercial activities, i.e. separating the financial entity from the core business. This change can be implemented at the operational level within the company as an initial step and then, if the risks and unfair advantages persist, finalised in the form of an ownership unbundling of the financial services divisions as a second step. Fig. 3 shows an overview of policy options available to the EU for eliminating the risks arising from the entry of big tech companies into the financial services sector. These options, grouped into three pillars (Part I, Part II and Part III), are described in detail below.

**Figure 3: Overview of policy options**

Supervision and Market Structure	Company / Big Tech	
<p><b>Part I: Strengthening supervision and critical infrastructure</b></p>	<p><b>Part II: Adapting corporate structures</b></p>	<p><b>Part III: Permitting ownership unbundling</b></p>
<p><b>1. Closer coordination between supervisory authorities</b> Implementation: Exercise existing powers and initiate supervisory forums</p>	<p><b>1. Establish a financial holding company within the group</b> Implementation: Reform of the DMA (Art.2(2), 5)</p>	<p><b>1. Rigorous application of existing competition law</b> Implementation: TFEU (Art.102)</p>
<p><b>2. Designate cloud providers under the DMA and enforce the respective rules</b> Implementation: Already CPS in DMA (Art.2(2)), EC must designate providers</p>	<p><b>2. Place banking activities under ECB supervision (G-SIB)</b> Implementation: DMA (Art.3) or SSM Regulation (Art.4)</p>	<p><b>2. New unbundling tool based on sector investigation</b> Implementation: Modelled after Germany, UK and "New Competition Tool"</p>
<p><b>3. Add artificial intelligence to DMA core platform services and designate providers</b> Implementation: Reform of the DMA (Art.2(2))</p>	<p><b>3. Centralised European supervision for big tech financial services</b> Implementation: Modelled after UK and NL, e.g. reform "High-Level Group" (DMA, Art.40)</p>	
<p><b>4. Strengthen critical infrastructure through public-sector alternatives</b> Implementation: Digital euro, promotion of public-sector digital Infrastructure</p>		

## 5.1. Part I: Strengthening supervision and critical infrastructure

**If the role that big techs play in areas relevant to the financial market is to be compatible with fair competition, then both the market structure and supervisory framework will have to be adapted.** In particular, AI and cloud services represent oligopolistic markets that are dominated by a small number of big tech companies. The lack of alternative providers makes it difficult to break their dominance because, under certain circumstances, pretty much the entire market could collapse without their services. Payment services, though not completely monopolised by big techs, represent an important financial market segment that is dominated mainly by US companies.<sup>57</sup> In this segment, there are also few European alternatives, and competition is insufficient. In order to end big tech's hegemony, Europe will have to prepare its market structures and supervisory frameworks for dealing with a situation in which these companies play a limited and regulated role. This will require the following actions:

## 1. Closer coordination: Overcoming the silo mentality between the supervisory authorities

**The regulation of big tech’s financial services is a cross-cutting issue for multiple authorities.**

For example, data derived from the provision of financial services can also be leveraged in other business areas, while a big tech’s power in a different market can be relevant to financial stability. In this context, the European principle of “same activities, same risks, same rules” is too short-sighted.<sup>58</sup> The financial supervisory authorities are focused on financial risks and therefore ignore many aspects related to fair competition and data protection. The same applies, conversely, to the competition and data protection authorities. The reasons for this silo mentality include not only the authorities’ narrow mandates, but also their lack of willingness to cooperate.

**Big tech’s financial strategy, which combines financial services with market power and data collection, requires a coordinated supervision of the financial market, competition and data protection.** Consumer protection and cybersecurity should also be integrated into the supervisory framework. In practice, however, the authorities often remain within their respective jurisdictions in spite of explicit possibilities for cooperation, like those anchored in legislation in Germany.<sup>59</sup> Although the first cooperation initiatives have been launched at the national level, their implementation has been poor. Joint supervisory committees like the UK’s Digital Regulation Cooperation Forum (DRCF)<sup>60</sup> and the Dutch Digital Regulation Cooperation Platform (SDT)<sup>61</sup> have only been used for consultation and coordination purposes. To ensure effective coordination, it is essential that knowledge and experience from national initiatives, along with the respective competences, be brought to the EU level by the respective governments.

## 2. Regulatory oversight of big techs’ cloud services must be strengthened.

**The critical dependency on big tech for cloud services at the back end of the financial services sector has long been recognised as problematic.** With regulations like the Digital Operational Resilience Act (DORA), the EU has attempted to reduce this dependency by defining requirements for IT security and resilience for financial institutions.<sup>62</sup> Although rules like these are important, they do nothing to prevent big tech’s growing market concentration and potentially anticompetitive practices. Addressing these issues will require a stricter application of existing competition regulations, like the DMA, as well as the updating of these regulatory frameworks.

**The Digital Markets Act (DMA) includes rules that govern cloud computing services, but these rules are not being enforced.** The DMA only applies to companies that have been explicitly designated by the European Commission as “gatekeepers” for core platform services (Art. 2(2)). Although cloud computing is listed as a core platform service (CPS) in the DMA, the European

Commission has yet to designate a cloud provider under the DMA.<sup>63</sup> As a result, none of the DMA rules apply to the cloud services provided by big tech companies, although they command huge market shares. Together, the companies Alphabet (Google Cloud, 12 per cent), Amazon (AWS, 32 per cent) and Microsoft (Azure, 23 per cent) account for nearly 70 per cent of the cloud market.<sup>64</sup> Accordingly, a first step would be for the European Commission to designate all qualifying cloud services under the DMA so that the DMA rules can be rigorously enforced.

### **3. The AI services of big techs also require antitrust scrutiny.**

**Rules for fair competition are urgently needed for the AI services of the big tech companies.**

Currently, AI is not listed as a core platform service (Art. 2(2)) under the Digital Markets Act (DMA), which shows how often regulations in the digital sphere lag behind industry advances.

Although the EU's Artificial Intelligence Act (AI Act)<sup>65</sup> sets out the first important guidelines for the development of AI models, it does not include any competition-related provisions. Therefore, it is essential that AI services be added to the list of central platform services in the DMA and that the corresponding rules be applied by the European Commission.<sup>66</sup>

### **4. Promoting fair competition through public-sector alternatives**

**In the EU, payment transactions qualify as critical infrastructure, which means that their dependence on non-European providers should be minimised.**<sup>67</sup> Cloud services are being increasingly discussed as belonging to the same category.<sup>68</sup> The roles played by big tech companies in these two markets differ in significance. It therefore makes sense to consider public-sector and European infrastructures in these areas that could reduce over-dependence on private companies. Measures like these could strengthen European autonomy and reduce the influence of the big techs.

**To date, not a single private-sector initiative has been able to break the dominance of US payment service providers in Europe.** National solutions like Bizum (Spain), Swish (Sweden) and Twint (Switzerland) have been successful in their respective countries.<sup>69</sup> However, owing to the differing interests and the lack of commitment among the parties involved, a European solution has failed to emerge. Furthermore, the pan-European payments market is comparatively inaccessible for new players owing to strong network effects, dominant economic players and the segment's lack of popularity with consumers.<sup>70</sup> The European Payments Initiative (EPI)<sup>71</sup> is a prominent example of a private initiative at the European level. It is a partnership of European banks and payment service providers from currently five EU countries, supported by the Eurosystem and the European Commission.<sup>72</sup> In 2024, the EPI payment service "Wero" was launched in Germany, France and Belgium. However, its adoption has got off to a slow start, as acceptance and coverage are still too low to seriously challenge existing providers.<sup>73</sup> Although



the project is still in its infancy, it shows that private-sector activity alone has not been able to break up the rigid oligopoly of the European payment services market.

**Public initiatives like the digital euro of the European Central Bank (ECB) are an important step towards a resilient infrastructure in the financial sector.** Payment services in the EU are currently being dominated by EU companies like PayPal, Visa, Mastercard and big techs. Approximately 70 per cent of European card payment transactions are handled by non-European payment providers.<sup>74</sup> The European market for payment services is suffering in particular from the problematic use of user data and high costs for merchants. The European Central Bank (ECB) is currently conducting an exploratory phase for a digital euro that could be introduced no earlier than 2028.<sup>75</sup> A digital euro could strengthen competition in the highly concentrated payment services market and discipline big tech companies and other providers. As an inexpensive solution that requires less personal data, it could increase pressure on providers to improve their data protection standards and reduce their prices.

**The concentration of big tech providers in the cloud computing and AI markets should also be reduced through public investments and incentives for alternative digital infrastructures.** Although regulations like DORA are aimed at reducing risks associated with the excessive concentration on a small number of IT service providers, part of the answer will have to be the creation of a more diverse field of providers.

Improved coordination and cooperation between different supervisory authorities for the supervision of big tech financial services and stronger competition through the promotion of private and public-sector initiatives, particularly in the critical areas of the financial services sector, could reduce risks and put an end to the fast-growing dependence on big techs.

## 5.2. Part II: Adapting corporate structures

**The European financial supervision system is inadequate for dealing with the complex corporate structures of the big tech companies.** Under the EU's activity-based system of financial market regulation, big tech subsidiaries apply for national licences for their financial services, such as payment services or e-money. These licences are linked to certain regulatory requirements, e.g. business management, anti-money laundering and consumer protection. The problem is that national supervision focuses solely on the licenced subsidiary, essentially ignoring the parent company. This limited focus fails to take into account the risks associated with the organisational links between the subsidiary and its parent. The problem is that big techs can leverage their databases, technical infrastructure and large customer bases from other business segments to grant themselves competitive advantages in the financial services sector<sup>76</sup> – an aspect that is not taken into consideration by this regulatory approach. The effectiveness of the current regulatory approach could be improved by adapting the big tech companies'

corporate structures to the supervisory practices. To achieve this, the following measures should be taken:

## **1. Adapting the corporate structures of big techs to the supervisory practice**

**A strict segregation of the financial activities into a separate legal entity within the big tech group can reduce risks to the financial system and promote fairer competition.** In this case, the segregation would not involve a complete divestiture of the subsidiary in the sense of ownership unbundling, as the two entities would remain under one corporate structure. The financial services of a big tech company could be grouped under a financial holding company and operationally isolated to the greatest possible extent from the rest of the business, much like under the German Ringfencing Act (Trennbankengesetz) or the Glass-Steagall Act,<sup>77</sup> which require the separation of business units. The financial holding company would apply for all financial services licences. Their activities could be reported separately in the “Segment Reporting” section of the business reports submitted to the US Securities and Exchange Commission (SEC).<sup>78</sup> This would create transparency and make it possible for the supervisory authorities to centrally monitor all financial services.

**Strict rules for “ring-fencing” the financial holding company within their parent company must be introduced.** Ring-fencing rules would prohibit the exchange of data and financial resources, as well as the shared use of technologies, such as servers and cloud services. This approach could minimise all contagion risks and unfair advantages arising from the links between the core business and the financial entity. In 2020, China chose a “segregation approach” when faced with similar challenges in the case of the big tech company Alibaba and its financial services division Ant Group (Alipay).<sup>79</sup>

**Rules for the establishment of a financial holding company could be embedded in the Digital Markets Act (DMA).** This could be achieved by adding financial services to the list of designated “central platform services” (Art. 2(2)) and amending Article 5, Obligations for gatekeepers, with the relevant guidelines. These guidelines could strictly prohibit the exchange of technologies, financial resources and data between the financial holding company and other company divisions. The European Commission, together with the European Parliament and Council, have the authority to make such amendments in accordance with Articles 19 and 12 of the DMA.

## 2. Placing banking activities under the supervision of the European Central Bank (ECB)

**Big tech companies should be placed under ECB supervision as soon as they begin offering banking services that require a banking licence.** ECB supervision is necessary owing to the companies' size and the pan-European scope of their activities. JPMorgan Chase, the world's largest bank by market capitalisation, tops the list of global systemically important financial institutions. Apple's net worth is six times as high as JPMorgan Chase's.<sup>80</sup> If a company like Apple were to become unstable owing to the risks arising from its banking activities, the effects on the financial system could be profound. Placing big techs with a banking licence under ECB supervision would require an amendment to either the Digital Markets Act (DMA)(Art. 3) or Article 4 of the SSM Regulation No. 1024/2013, which established the Single Supervisory Mechanism.<sup>81</sup>

## 3. A centralised European supervision for big tech financial services

**Big techs' presence in the European financial services sector requires a European supervisory infrastructure with the appropriate scope.** Effective compliance checks by the competent national authorities of the EU member states are unrealistic, considering the size and complexity of the big tech firms. International cooperation between the national supervisory authorities both in and outside of the EU is also unrealistic, owing to the differing political interests of the home and guest countries and the fact that the international organisations (e.g. the International Monetary Fund, IMF, and the Bank for International Settlements, BIS) lack the necessary mandates.<sup>82</sup> Furthermore, there is no international regulatory framework for big tech's financial activities equivalent to the Basel Accords for banks.<sup>83</sup> This means that, at the very least, European supervision and rules will be needed in order to minimise the risks associated with the financial activities of big tech companies in the EU.

**In order to ensure effective European supervision, cooperation between the authorities will be essential, in particular the authorities tasked with financial supervision, competition supervision, consumer protection, data protection and cybersecurity.**<sup>84</sup> Although cooperative forums like these have already been established in several EU countries, like the DRCF in the UK,<sup>85</sup> the DST in the Netherlands<sup>86</sup> and the Digital Cluster in Germany,<sup>87</sup> they have no enforcement powers, and their focus is limited to general issues associated with the digital economy. Nevertheless, these bodies of regulators could serve as models for a European supervisory body with a clear legal mandate. Other options would be to expand and develop the role of the "High-Level Group" (Art. 40) established by the Digital Markets Act (DMA) or to set up a new committee on the basis of a freestanding piece of legislation.<sup>88</sup> Governments that have already initiated committees like these should share their experience and expertise for the establishment of a European equivalent in the EU.

**The adaptation of the corporate structure through the establishment of a financial holding company requires ongoing and permanent supervision, as well as vast amounts of resources.**

Risks arising from the relationship between the business lines cannot be completely eliminated as long as the financial entity and the core business remain under one corporate structure.<sup>89</sup> Nevertheless, it would still be possible for the big tech company to continue offering financial services and profit from their reputation and innovative power. And the clearer corporate structures would make supervision at least somewhat easier for the authorities. This approach is already being considered by stakeholders, like the Bank for International Settlements (BIS) and the International Monetary Fund (IMF), albeit with less rigorous requirements.<sup>90</sup>

### **5.3. Part III: Permitting ownership unbundling**

**Even if a big tech's financial services are segregated from its non-financial businesses, the risks associated with an excessive concentration of power cannot be excluded.** The supervision of big tech firms is difficult, and a strengthening of their position cannot be ruled out, particularly under the new Trump administration since 2025. The appointment of Elon Musk as a government advisor has been described by experts as a merger of Silicon Valley's power with state authority.<sup>91</sup> In light of these geopolitical uncertainties, the EU must urgently take action to safeguard its sovereignty and autonomy, particularly with respect to the critical infrastructure in the financial services and IT sectors.

**If the operational separation of a firm's financial activities from its non-financial businesses proves ineffective in curtailing the unfair competition and risks, an ownership unbundling of the financial services entity from the rest of the big tech firm should be considered.** This approach would make it impossible for the respective big tech company to remain simultaneously active in the financial services sector and other sectors. Accordingly, the big tech company's de facto advantage over traditional financial services companies would be definitively eliminated. The same would be true for every contagion risk between the financial entity and the core business. In order to make this option possible, existing elements of European competition law would have to be implemented more rigorously, and new elements introduced.

#### **1. Rigorous application of existing competition law in cases of abuse**

**European competition law allows for the imposition of structural remedies like unbundling in cases involving the abuse of market power (Art. 102, TFEU).**<sup>92</sup> However, structural remedies are rarely imposed, as they require evidence of market power abuse and involve burdensome and lengthy procedures. The associated procedures and lawsuits require a significant amount of resources, and the authorities often lag behind the well-resourced big-tech firms, as was seen in the seven-year investigation into Google's shopping service.<sup>93</sup> In addition, when it comes to the

imposition of penalties, antitrust authorities prefer behavioural remedies like fines over structural measures.<sup>94</sup> These challenges make it difficult for the supervisory authorities to exercise effective supervision, in particular in the dynamic and fast-moving big tech industry.

**Wherever a legal basis for unbundling exists, the option of unbundling should be actively considered by the supervisory authority of the big tech company.** Fines are highly burdensome for the authorities and nothing more than an acceptable cost of doing business for the big techs. Active merger control can also play an important role, particularly in cases involving competitors, which are often bought up by the big tech companies.

## 2. A new competition tool for conducting investigations in markets with structural problems

**European competition law targets companies that abuse their market position.** The problem is that, in the financial services sector, big techs have yet to achieve a dominant position. Instead, they obtain unfair advantages by leveraging the network effects of their platforms and using their market power from other areas – often without what could be considered direct abuse. Customers who already use other services provided by the big tech, such as search engines, email or cloud storage, will most likely be more inclined to use the company’s payment services. Such advantages create *structural competition problems* against which the authorities have few possibilities to take action for fair competition within the current legal framework.

**An EU-level unbundling tool based on market investigations that depart from the traditional dominance concept would enable antitrust authorities to take targeted action against the unfair advantages enjoyed by big tech companies.** Entire markets could be investigated for fair competition conditions, and companies without a dominant market position that nevertheless have unfair advantages could be without an explicit abuse of market power. Such tools for market investigation have already been introduced at national level.<sup>95</sup> Germany established an equivalent system with the introduction of the 11th amendment to its Competition Act (GWB) in 2023.<sup>96</sup> A similar tool (the “New Competition Tool”) was considered at EU level in 2020 but, in spite of the widespread support from national competition authorities, was not pursued, owing to a preference for other options like the DMA.<sup>97</sup> Since then, prominent advocates, like Sven Giegold and most recently Mario Draghi in his 2024 report on European competitiveness, have been calling for the introduction of this tool at EU level.<sup>98</sup> Governments that have already introduced instruments like these at national level could share their experience at European level.

**A segregation of financial services entities from the rest of the big tech firm establishes clear conditions and eliminates all risks.** Unbundling processes can be very time-consuming and resource-intensive. However, once their implementation is finalised, no additional supervision is required, because the business entities in the financial services sector no longer belong to the

big tech company. In general, this would also remove all incentives for big techs to expand into the financial services sector. Most certainly, it would also stop big techs from further concentrating their power, at least through the provision of financial services.

**The policy options presented here as Parts I through III are aimed at not only preventing big tech companies from using financial services to further concentrate their power, but also minimising the associated risks to consumers, fair competition, the financial system and democracy.** Strategy elements I - III are to be implemented simultaneously so that it is possible to react more quickly to the rapid expansion of the big techs by applying an adapted supervisory system, market structure and corporate structure (Part I + Part II). If the risks persisted in the medium term, then it would be possible to apply the implemented competition law reforms that permit the ownership unbundling of the financial entity from the big tech regardless of whether an abuse of dominance exists (Part III).

## 6. CONCLUSION

**Big tech's unchecked power is one of the greatest challenges facing our economy, society and democracies in the digital age.** These companies already dominate entire sectors, like AI and cloud services. Now, they are advancing into the financial services sector and threatening to become influential financial market players. The corporation as a whole profits excessively from its financial strategy, owing to the collection of highly valuable financial data, the extra revenues and the addition of attractive offerings to its platforms. The fact that they provide financial and technology services means that we are dealing with critical infrastructure. An excessive dependence on non-European companies is risky, particularly in these geopolitically turbulent times.

**Many of the necessary supervisory powers and supervisory infrastructures have long been in place at national level but have proved inadequate.** National governments and stakeholders such as supervisory agencies should share their experience to ensure that proven and effective frameworks for the supervision and regulation of big tech's financial services can be created at EU level. The fact is that big techs are not national in scope. They are international conglomerates that, with their European banking and financial services licences, are becoming active throughout the European Economic Area.<sup>99</sup> **Accordingly, supervision at EU level represents an attempt to establish a supervisory infrastructure with the appropriate scope.**

**In order to eliminate the unfair advantages of big techs in the financial services sector, a strict segregation of the financial entity from the core business seems to be the most sensible approach.** Political action is urgent, as big tech's expansion into the financial services sector is occurring at a staggering pace. Accordingly, political solutions need to be found and implemented as quickly as possible.

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- <sup>73</sup> Heinz-R. Dohms, 20 December 2024, *Die sich einnistende Sorge, aus Wero könnte ein zweites Paydirekt werden*, Finanz-Szene.de, [last accessed on 10 February 2025](#).
- <sup>74</sup> F. Panetta, 18 November 2021, *Designing a digital euro for the retail payments landscape of tomorrow – Introductory Remarks*, European Central Bank, [last accessed on 5 November 2024](#).
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- <sup>76</sup> J.C. Crisanto, J. Ehrentraud, M. Fabian and A. Monteil, 2022, *Big tech interdependencies – a key policy blind spot*, Bank of International Settlements, FSI Insights on policy implementation No. 44, [last accessed on 7 February 2025](#).
- <sup>77</sup> In 1999, the US repealed most of the Glass-Steagall Act.
- <sup>78</sup> According to the Accounting Standards Codification subtopic Segment Reporting 280 (ASC 280), financial holding companies must be reported separately under "Segment Reporting" in the business report submitted to the SEC (10-K) provided certain criteria are met.

- <sup>79</sup> Melches, Carolina; Peters, Michael (2024): *More Money, More Power: Big Techs in Finance*, Finanzwende Recherche, Berlin, [last accessed on 12 February 2025](#).
- <sup>80</sup> Market capitalisation:  
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- <sup>81</sup> Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.
- <sup>82</sup> S. James and L. Quaglia, 2024, *Bigtech finance, the EU's growth model and global challenges*, European Parliament, Economic Governance and EMU Scrutiny Unit, [last accessed on 7 February 2025](#).
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