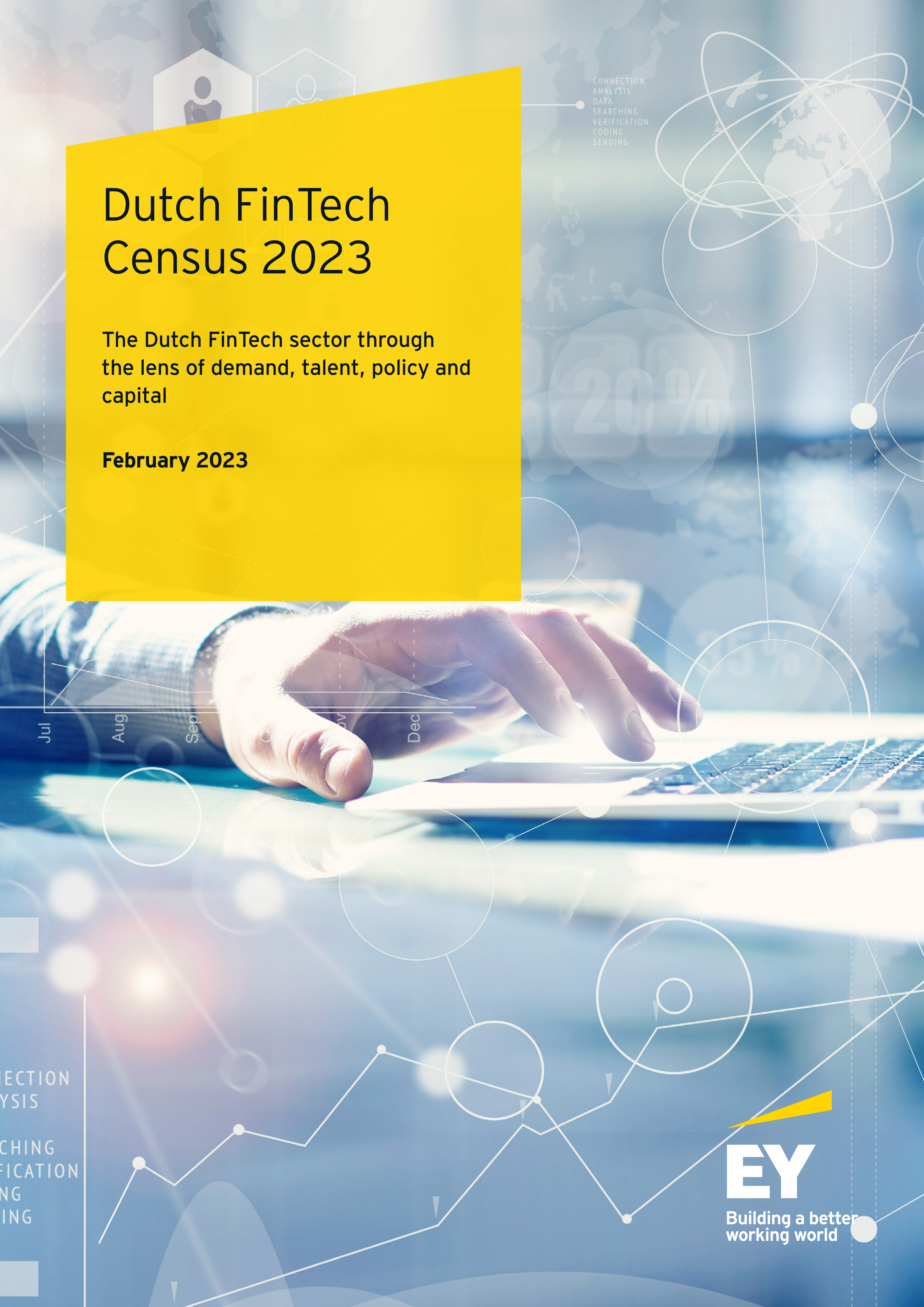
Dutch FinTech Census 2023

The Dutch FinTech sector through the lens of demand, talent, policy and capital

February 2023



Building a better working world

Table of contents

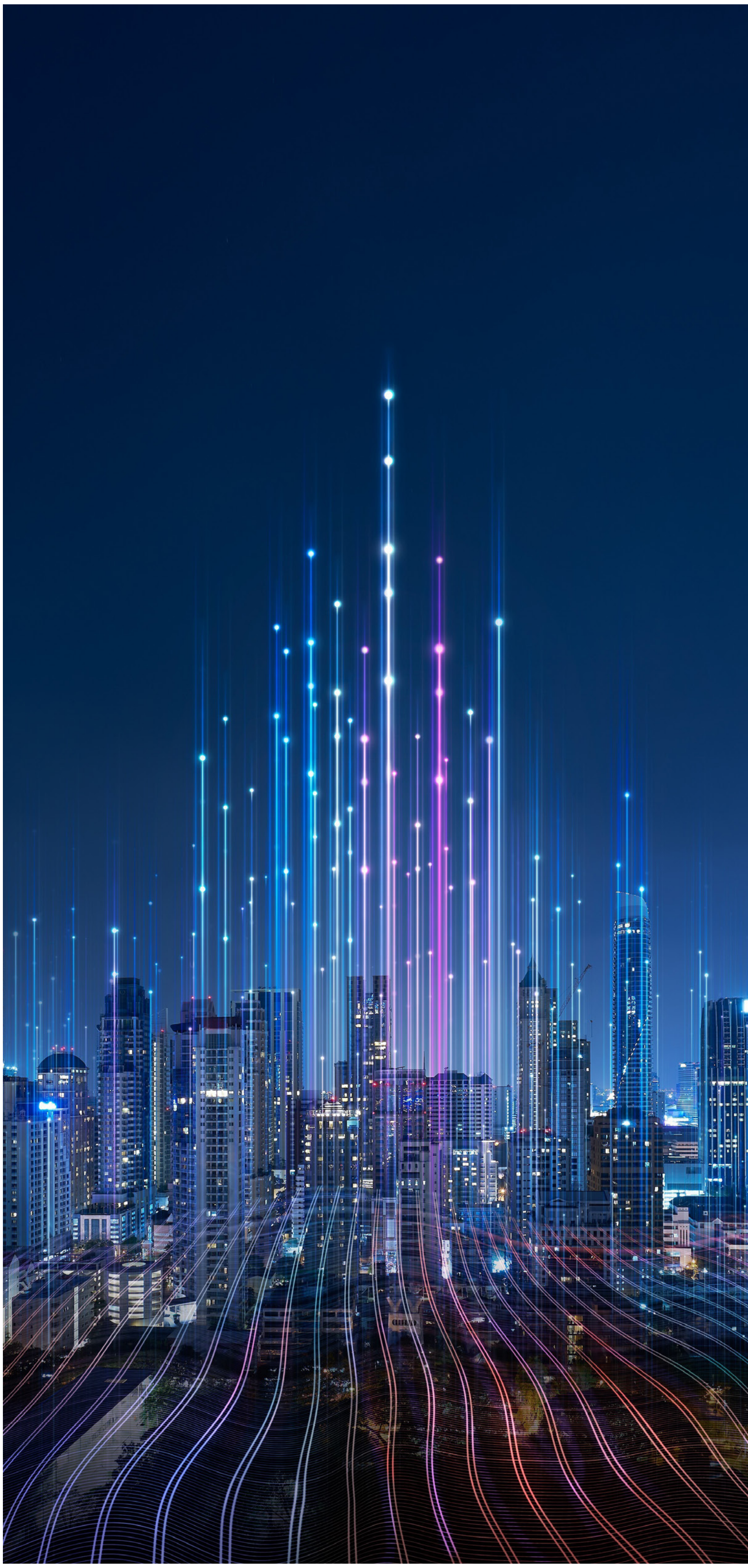
1. Introduction

The FinTech sector has grown explosively over the past decade, with startups receiving billions in venture capital (some of which have become unicorns), and established financial players buying new ventures or building their own FinTech offerings. This growth has continued unabated in recent years. For many, the COVID-19 pandemic was the first crisis in which the resilience of the company was tested. Despite the overall economic contraction caused by the pandemic[1], the FinTech sector appears to have weathered this challenge well. Whereas the Dutch FinTech landscape consisted of approximately 635 FinTech parties in 2019[2], this has grown to approximately 861 identified FinTechs in 2023[3]. This increase confirms the entrepreneurial mindset among FinTechs to create opportunities, innovate and remain resilient in uncertain times. Even now the sector is plagued by geopolitical and economic turmoil. Due in part to high inflation, consumer confidence is low and there is continued tightness in the labor market. Nevertheless, the entrepreneurial spirit remains characteristic among the FinTech parties.

FinTechs are now fully intertwined in the financial services industry. In 2019, there was a fragmented landscape in which FinTech startups, established financial institutions and BigTech parties developed FinTech propositions. This has evolved to more connectedness in the sector to jointly bring innovative propositions to the market[4]. FinTech is also widely accepted from the consumer's point of view. The global adoption of FinTech services, as measured in EY's FinTech Adoption Index survey[5], has risen to such an extent that it is no longer being investigated. The share of FinTech companies in the Dutch economy has increased due to the increased acceptance of digital payments, investments in technology-based solutions, supporting government measures, increased use of Internet of Things devices and increased consumer acceptance. The direct gross value added of the sector to the Dutch economy is estimated at approximately € 2.1 billion[6]. This emphasizes the importance of ensuring that a good environment is maintained, so that innovation continues to flourish, it is beneficial to join as a new party, competition is stimulated and the quality and development of financial services is maintained.

[1] De Nederlandsche Bank, Actuele economische vraagstukken – Corona, 2020
[2] EY, FinTech Census, 2019
[3] EY analysis 2023
[4] EY, Collaboration at the core: evolving partnerships between banks and FinTechs, 2021
[5] EY, Global FinTech Adoption Index, 2019
[6] TechLeap, Netherlands Startup Employment, 2022; Storm2, FinTech market report Netherlands, 2022; EY analysis 2023

1.1 Background and purpose



In July 2020, former Minister of Finance Wopke Hoekstra presented the FinTech Action Plan[7] to the House of Representatives, based on the first Dutch FinTech Census 2019. This included various action points to better support the FinTech sector by putting the Dutch FinTech climate on the map nationally and internationally, improving access to talent and knowledge and realizing future-proof regulations with room for innovation. As the October 2021 progress report shows, a large number of these actions have progressed or been fully completed[8]. As part of its efforts to ensure that the Netherlands continues to have a growing, sustainable, responsible, innovative and thriving financial services and FinTech sector, the Ministry of Finance commissioned EY to conduct a second edition of the Dutch FinTech Census. This Census monitors the Netherlands' status as a FinTech hub, investigates the impact of COVID-19, and examines ways in which the sector can be further facilitated and stimulated.

The aim of this report is to contribute to a greater awareness and understanding of the Dutch FinTech sector by mapping the sector in 2023 and publishing aggregated statistics. In addition to mapping the development of the sector, the Census provides a platform for FinTech companies to give their input on the opportunities and barriers that affect their business.

EY conducted this Ministry of Finance-commissioned study between October 2022 and February 2023. The following research questions were used:

1. What is the nature and size of the FinTech sector in the Netherlands?
2. Which factors, including financial regulatory factors, do FinTechs consider promoting or hindering the entry and/or development of innovative products and services in the Netherlands?
3. How does the Netherlands perform in the field of FinTech compared to other countries?

Based on the results of this research, the Ministry of Finance will be able to look at the Netherlands' current FinTech position with new insights.

[7] Ministerie van Financiën, Aanbiedingsbrief FinTech-actieplan, 2020
[8] Rijksoverheid, Voortgangsbrief FinTech-actieplan, 2021

1.2 Structure of the report

As a starting point for the research, we defined the most important attributes of the FinTech climate. These attributes were the guiding principle for structuring the desk research, as well as the qualitative and quantitative research. This report is also structured around these attributes. In line with the previous FinTech Census, the model[9] is used with four attributes covering the FinTech ecosystem, see figure 1:

- **Demand:** Identifying market demand for FinTech services
- **Talent:** Attract and retain talent
- **Policy:** Support from the government by policy
- **Capital:** Raising capital

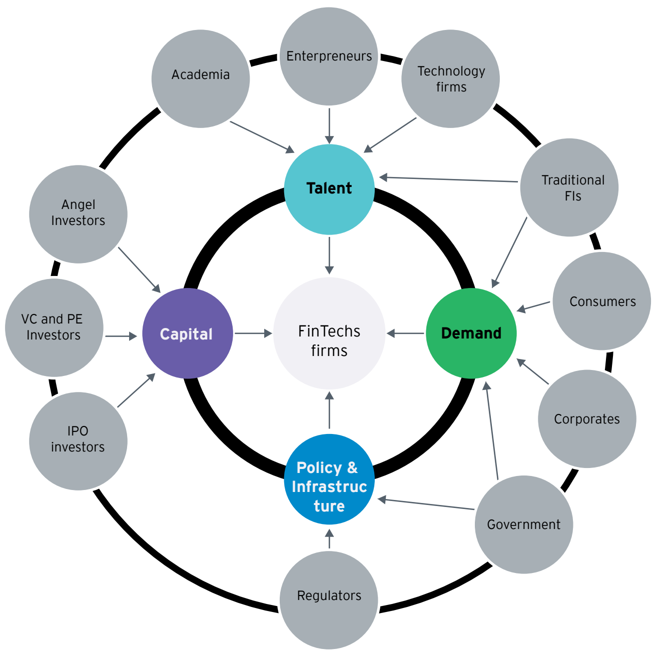


Figure 1: Four attributes of the FinTech ecosystem

The above attributes are seen as driving forces that determine the success of a FinTech company. The following chapters explain the current state of the Dutch FinTech sector per attribute and discuss which aspects FinTech companies experience challenges or obstacles with.

Chapter 2 looks at the most important factors for a FinTech to establish itself in a country and how the Netherlands scores on this. It also explains what FinTechs perceive as the most important challenges and opportunities in the current financial sector. Chapter 3 provides an overview of the total population size in the Dutch FinTech landscape, looking at characteristics such as services, company form and location. Chapter 4 presents the demand, use and target group of FinTech services, including the impact of COVID-19 on the sector. Chapter 5 provides insight into the extent to which FinTech companies are able to attract and retain the necessary talent and skills. Chapter 6 then describes FinTech companies within the framework of the financial sector, including the issues of legislation and regulations, government and regulator. Chapter 7 takes a closer look at the financial development of FinTech companies and the investment climate, discussing the possibilities for raising capital. Chapters four through seven provide an overview of the promoting and hindering factors that emerged from the research, in line with research question two. In Chapter 8, the focus is shifted to a broader international perspective by making a comparison between countries, to reflect on how the Netherlands compares to peer countries. In the preceding chapters, examples from similar countries are also highlighted on relevant topics. Finally, Chapter 9 discusses recommendations to further develop the FinTech sector and allow it to flourish. The annexes explain the methodology of the research in more detail and include a list of sources.

[9] EY, FinTech and Ecosystems, 2021

Research questions

1. What is the nature and size of the FinTech sector in the Netherlands?
2. Which factors, including financial regulatory factors, do FinTech consider promoting or hindering the entry and/or development of innovative products and services in the Netherlands?
3. How does the Netherlands perform in the field of FinTech compared to other countries?

Reading guide

Chapter	Relevant research question	Relevant theme from the research model
Introduction	N/a	N/a
The Netherlands as a country of establishment	1, 2, 3	FinTech ecosystem as a whole
Dutch FinTech overview	1, 2	FinTech ecosystem as a whole
Demand, use and target group of FinTech services	1, 2	Demand
Talent and skills	1, 2	Talent
Regulation and supervision	1, 2	Policy
The financial development of FinTechs and the investment climate	1, 2	Capital
How does the Netherlands compare to other countries?	3	FinTech ecosystem as a whole
Recommendations	N/a	N/a

Fact sheet

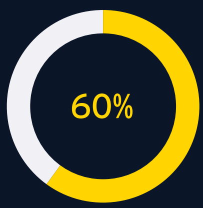
Profile of companies in the sector

861
FinTechs

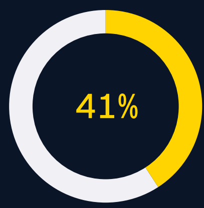
2011
Average year of establishment

40%
Headquartered in Amsterdam

Growth expectations



expect to grow in revenue in 2022



expect to grow in profits in 2022

Development opportunities for FinTech companies

1. Access to existing or new markets
2. Access to new investment
3. New collaboration opportunities

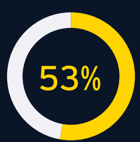
Laws and regulations

62%
indicate that they have no difficulty in complying with laws and regulations

37%
find the administrative requirements to comply with laws and regulations disproportionate

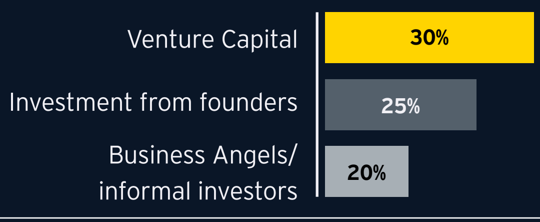
40%
indicate they would like to see a more active role of the government in facilitating innovation in the sector

Financing and investment



have raised capital

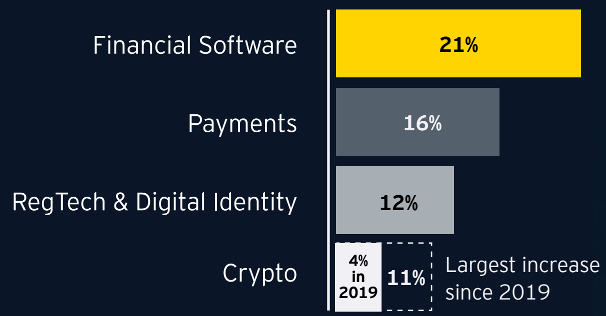
Top three sources of funding



FinTechs indicate that they will mainly invest more in APIs, Artificial Intelligence / Machine Learning and Cloud Technology in the next 12 months

FinTech services

Top four types of service



Most attractive factors of the Netherlands

1. (Digital) infrastructure and location
2. English language proficiency
3. Culture in the Netherlands

Attracting talent

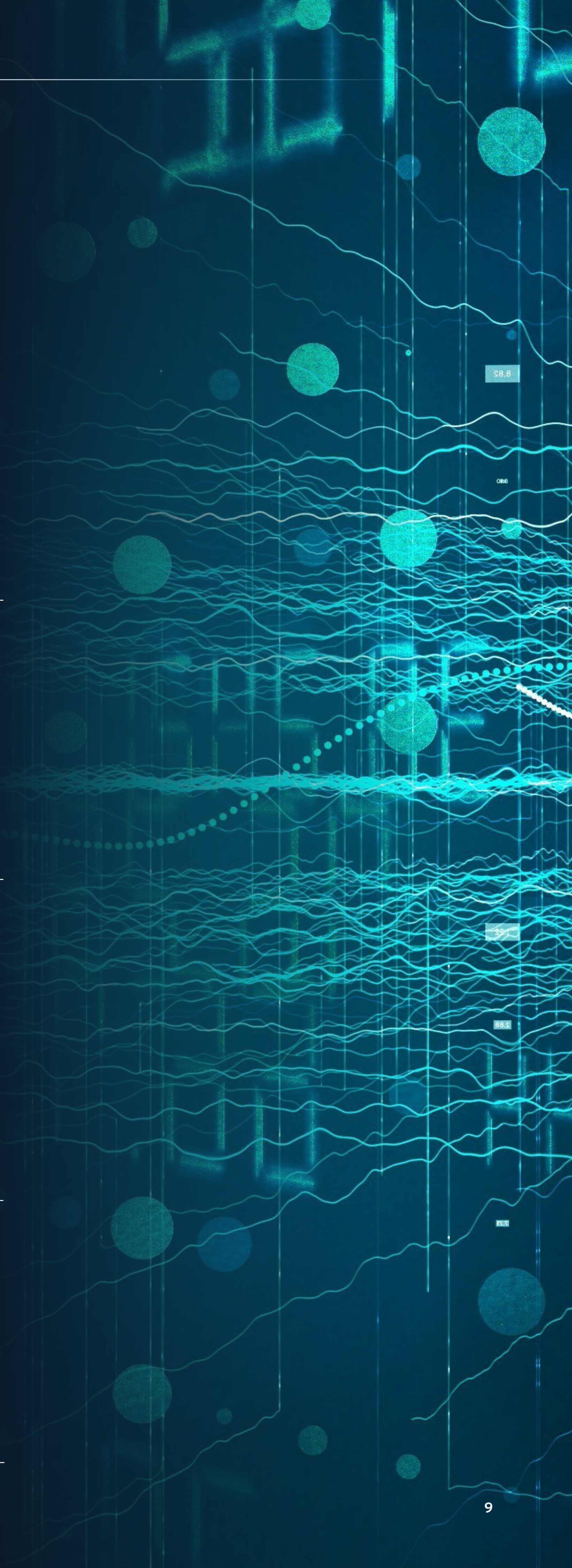
57% Struggle to find qualified staff

56% Find the biggest barrier to retaining staff is the provision of appropriate remuneration

40% Have 11 to 50 employees

Biggest challenges experienced by FinTechs

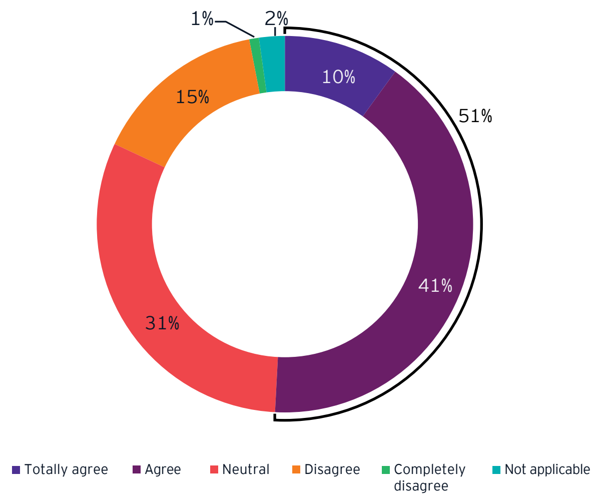
1. Attracting qualified or suitable talent
2. General economic environment
3. Geopolitical developments



2 The Netherlands as a country of establishment

When setting up or expanding an enterprise, consideration should be given to the location. In many cases, entrepreneurs will choose to establish their business in the country where they live. The extent to which the business climate is suitable and attractive for setting up a company is then also considered. For existing FinTechs that want to expand (internationally), such considerations are particularly important. The Netherlands is seen by 51% of FinTechs as an attractive market (see figure 2), with the (digital) infrastructure and location, the English language proficiency and culture in the Netherlands seen as the most attractive factors. 16% of FinTechs see the Netherlands as an unattractive market. The remuneration policy and the costs of complying with laws and regulations are the most relevant factors, although these do not determine the choice of country of establishment.

This chapter describes the determining factors for FinTech parties in the choice of location of their company. These factors are compared with the extent to which the Netherlands scores on them. The attractive and less attractive aspects of the Netherlands are briefly discussed as an introduction. The following chapters on demand, talent, policy and capital further elaborate on these factors and underlying reasons for the ranking. Finally, the biggest challenges and opportunities for FinTechs are highlighted.



Figuur 2: The Netherlands is a very attractive market for FinTech companies (n = 126)

2.1 Key differentiators of the Dutch FinTech landscape

FinTech companies are weighing up how best to develop their business, how to best serve their market and, for international FinTechs, from which location the FinTech company can be most successful. FinTechs founded in the Netherlands usually do not consciously consider where they are located. Because of the origin of the owner, the Netherlands as the country of establishment is a given for them. Nevertheless, a country of establishment must meet important basic factors for FinTechs to flourish. Figure 3 shows what the most determining factors are for a country of establishment and how the Netherlands scores on this, from most important to least important for FinTechs.

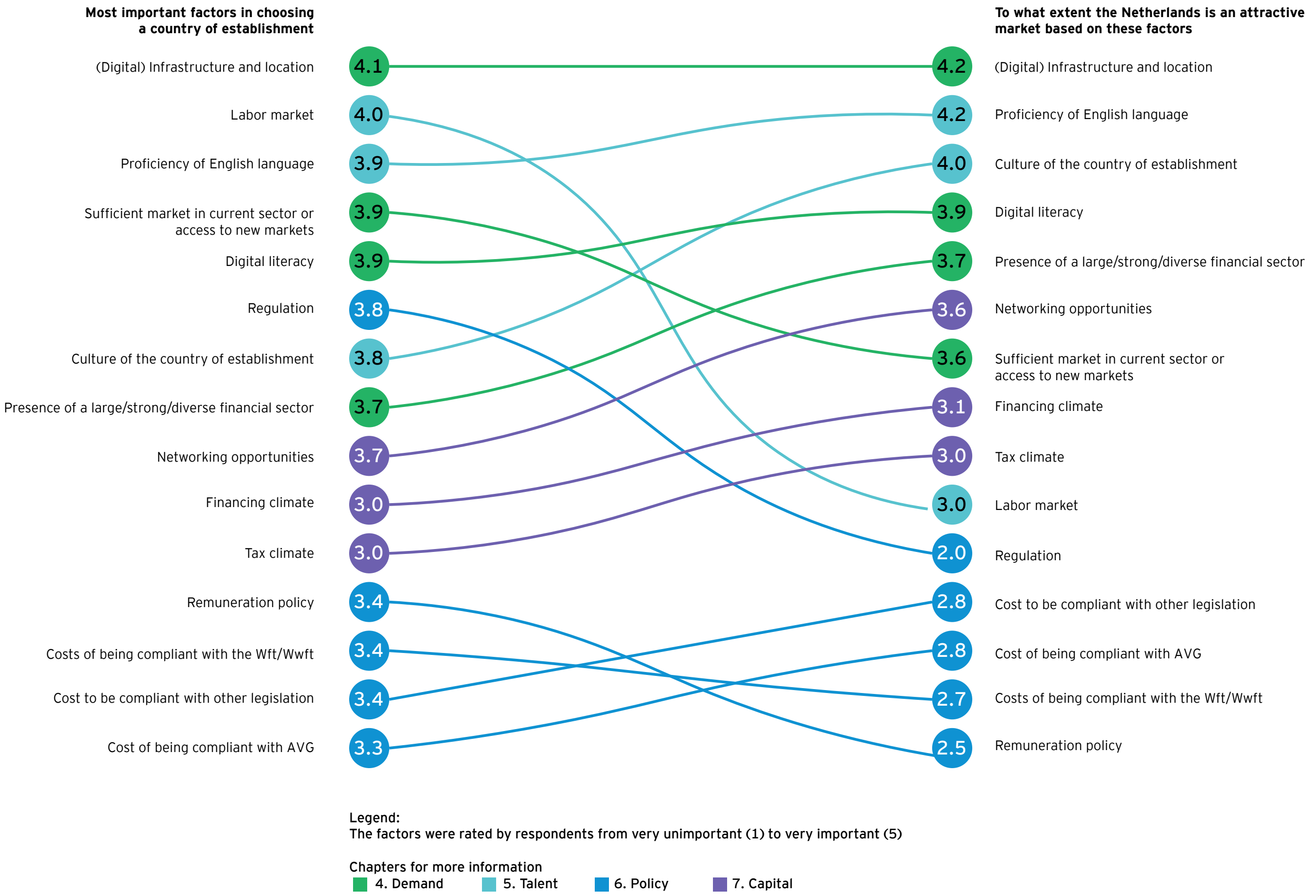


Figure 3. Important factors when choosing a country of establishment and to what extent the Netherlands is an attractive market based on these factors (n = 126)

Digital infrastructure and location
Connectivity and digital infrastructure (such as internet and data structure) form the basis for FinTechs to realize digital solutions. In addition, a physically central location guarantees (international) accessibility and connectivity. FinTechs find the factor (digital) infrastructure and location the most attractive about the Netherlands as a country of establishment. This is also confirmed in other studies: consistent with 2019[10], the Netherlands is in third place in the Digital Economy and Society Index (DESI) 2022[11], which rates European countries on the basis of integration and degree of connectivity, human capital, internet use, integration of digital technology and digital government services. The Netherlands has retained its third place, partly because companies and the government are investing additional resources into (research into) digitization and technology[12]. This makes the Netherlands attractive for (starting) FinTechs, as a good digital infrastructure lays a foundation for offering digital solutions. The Netherlands is ahead of the European average with, among other things, providing access to fast fixed broadband internet via cable or fiber optics and availability of 5G mobile internet. Furthermore, the Netherlands is seen as the digital gateway to Europe, thanks to the Amsterdam Internet Exchange[13].

“

A Dutch branch means reliability, everything is well organized and gives access to the rest of Europe.

FinTech companies in the Netherlands also score high on location. Due to the strategic geographical location, the reliable logistics infrastructure and the connectivity that Schiphol offers, there are good global connections, which is advantageous for (internationally) operating entrepreneurs[14].

Labor market
The second most decisive factor for FinTechs when choosing a country of establishment is sufficient availability of qualified personnel. This is essential to (further) develop the product, put it on the market and thus achieve further growth. Attracting qualified talent remains a common thread for FinTechs to realize their ambitions. 57% cite attracting qualified or suitable talent as the biggest challenge (see figure 4; this was also the case in 2019). A combination of factors makes this challenge difficult to solve, as described in Chapter 5 ‘Talent and skills’.

English language proficiency
The proficiency of the workforce in the English language is in the top three most determining factors and is seen as a very attractive factor in the Netherlands by FinTech companies. Since 2019, the Netherlands has been number one in the annual survey by educational institution Education First (EF), which examines the best English-speaking countries where English is not the mother tongue[15]. The main reasons why the Netherlands speaks English well is to be able to make its voice heard internationally (relatively few people worldwide speak Dutch), speaking English offers the opportunity to do business internationally, and international films and series are subtitled rather than dubbed. The high level at which English is spoken in the Netherlands ensures good communication in an international team, makes it easier to enter the international market and makes the Netherlands very attractive for international employees in terms of living and working. These themes are further discussed in Chapter 5 ‘Talent and skills’.

[10] European Commission, Digital Economy and Society Index (DESI), 2019
[11] European Commission, Digital Economy and Society Index (DESI), 2022
[12] Rijksoverheid, Nederland terug in top drie EU-ranglijst digitale economie, 2022
[13] Netherlands Foreign Investment Agency, Corporate Brochure 11, 2021
[14] Netherlands Foreign Investment Agency, Corporate Brochure 11, 2021
[15] Education First, English Proficiency Index, 2022
[16] Education First, Can't Dutch this: waarom het Engels van Nederlanders zo goed is, 2018

> The Netherlands is unique in Europe because it is fully accessible in English, not only in terms of the recruitment pool of the local population, but also as an attractive proposition for international employees.

Sufficient sales market in the current sector

A large market is crucial for a FinTech to ensure that sufficient products or services can be sold in the country of origin. The demand for FinTech products and services in the Netherlands from both consumers and companies is high. However, FinTechs estimate the future potential for the Netherlands in terms of sales market to be relatively low because of its small population; this is further discussed in Chapter 4 'Demand, use and target group of FinTech services'. For FinTechs, access to existing or new markets contributes most to the future development of their business (see figure 5).

Digital literacy

The quality of the Dutch education system (number ten worldwide[17]) contributes to the digital literacy of society. From an employer's perspective, digitally savvy and innovative employees help develop FinTechs digital solutions. On the other hand, the increasing digital adoption of both consumers and businesses is creating a growing demand for new business models driven by FinTechs. The Netherlands scores high on digital literacy and demand for FinTech services, which is further discussed in Chapter 4 'Demand, use and target group of FinTech services'.

Regulations

Although regulations are not extremely decisive in the choice of a country of establishment, the Netherlands is perceived as relatively unattractive in terms of laws and regulations. Rigid implementation of laws and regulations and a lack of customization means that compliance with regulations is seen as a challenge (number five in figure 4). Among other things, the strict implementation of European open standards contributes to this. Interviews show that legislation is preferred over directives because they can be interpreted differently across countries. Chapter 6 'Regulation and supervision' goes into this in more detail.

> The Dutch mentality is to stick to the guidelines and to interpret them very strictly.

Culture of the country of establishment

The culture in the Netherlands, which refers to both professional (e.g. work culture, entrepreneurial culture) and private culture (e.g. living climate and digital adoption) is generally perceived as an attractive factor for establishment (number three most attractive factor in the Netherlands as a country of establishment). Amsterdam in particular is often mentioned as a pleasant city to live in, for both domestic and foreign talent. In addition to Amsterdam, the rest of the Randstad also attracts a lot of (young) talent because of its international and modern character and the presence of good universities[18]. The attractive Dutch living and working culture for (international) staff is further explained in Chapter 5 'Talent and skills'.

[17] U.S. News, Best Countries for Education, 2022
[18] Netherlands Foreign Investment Agency, Corporate Brochure 11, 2021

Presence of a large, strong and diverse financial sector
The presence of a large, strong and diverse financial sector contributes to the creation of a sufficient business (B2B) market in the Netherlands, because FinTech parties support established players in applications of technological solutions. Collaboration opportunities make an important contribution to the development of FinTechs (see figure 5). In addition, such a financial sector ensures a greater availability of talent with financial knowledge. This factor reaches the top five most attractive factors in the Netherlands and is further explained in Chapter 4 'Demand, use and target group of FinTech services'.

Networking opportunities and the financing and tax environment
The financing and tax environment determines, among other things, the possibility to raise capital and the degree of tax burden, which are determining factors for FinTechs to grow. FinTechs experience ample investment opportunities but foresee a shift due to the rise of interest rates and geopolitical conditions. As a result, FinTechs indicate that they benefit from access to new investment (see figure 5). Sufficient networking opportunities with investors are beneficial because they bring together supply and demand of capital. These elements are discussed in detail in Chapter 7 'The financial development of FinTechs and the investment climate'.

Remuneration policy
Although remuneration policy is not seen as a determining factor, it is the least attractive factor in the Netherlands as a country of establishment. FinTechs also find it to be the most hindering factor for attracting talent. According to the European Capital Requirements Directive, the variable part of a person's total salary may not exceed 100% of the fixed part, with Member States being allowed to set a maximum bonus ceiling of 200%[19]. In the Netherlands, the bonus ceiling is 20%, indicating a stricter interpretation of the remuneration policy compared to the rest of Europe. In addition, the granting of options to FinTechs' employees may be limited in the Netherlands. Chapter 5 'Talent and skills' further explains the impact of the remuneration policy.

Costs to comply with laws and regulations
Finally, the cost of complying with laws and regulations weigh the least heavily when choosing a country of establishment. The cost of being compliant with the General Data Protection Regulation (GDPR) is the least important for FinTechs. Due to European privacy legislation[20], the level of data protection in Europe is the same and affects every company that processes personal data. Due to European privacy legislation, this factor has little to no influence on the choice of the country of residence within Europe. The costs of complying with the Financial Supervision Act (WFT) and the Money Laundering and Terrorist Financing (Prevention) Act (WWFT) are however perceived as disproportionate. The costs of complying with other legislation are also perceived as an unattractive factor of the Netherlands as a country of establishment, which is explained in more detail in Chapter 6 'Regulation and supervision'.

International factors
In addition to national factors, global aspects such as the general economic climate, geopolitical developments and the global FinTech climate pose a challenge for further development for FinTechs (see figure 4). First, the overall economic climate is cited by 43% of FinTechs as a challenge for the year ahead. Macroeconomic challenges such as inflation, rising interest rates and the cost of living are expected to affect FinTechs' operations. In Europe, rising inflation was mainly driven by supply-side challenges, resulting in high energy and food prices[21]. This cuts into consumers' wallets, which can put pressure on the demand for FinTech products and services. Moreover, 2022 started with interest rates in Europe approaching zero, but was significantly boosted by the monetary policy of the European Central Bank, in order to curb inflation. Rising interest rates generally make it harder for FinTechs to raise capital, given the higher costs associated with borrowing money. Global developments in recent years are also of concern to FinTechs: geopolitical developments and the global FinTech climate are cited as challenges by 26% and 25% of FinTechs respectively. Interestingly, COVID-19 is the least of the concerns among FinTechs as a challenge for the year ahead. Nevertheless, the world in which FinTech

[19] Europese Unie, Richtlijn 2013/36/EU, 2013
[20] Autoriteit Persoonsgegevens, Internationale privacywetgeving
[21] EY, Global Economic Outlook January, 2023

products and services are offered has changed significantly compared to a few years ago. In 2022, for example, the energy crisis and the war in Ukraine were also central. This creates uncertainty in the global FinTech market, for both FinTechs and (foreign) investors. The changing mindset of investors is discussed in more detail in Chapter 7 'The financial development of FinTechs and the investment climate'.

The biggest change in the findings of this Census compared to that conducted in 2019 is that in the top three most determining factors when choosing a country of establishment, 'English language proficiency' (number one in 2019) has been exchanged for 'labor market' (number five in 2019). As discussed in more detail in Chapter 5 'Talent and skills', this reflects the tightness of the labor market in 2023. In addition, attracting talent, collaboration with established players and customer adoption were central to 2019. While attracting talent is still the biggest challenge in 2023, the next two challenges in 2023 have decreased significantly compared to 2019. Possible explanations for less challenge in collaboration are the increased independence of FinTechs and financial institutions that have come to embrace FinTech solutions in response to COVID-19. The latter, in combination with a society that increasingly embraces FinTech solutions, explains the decrease in customer adoption as a challenge.

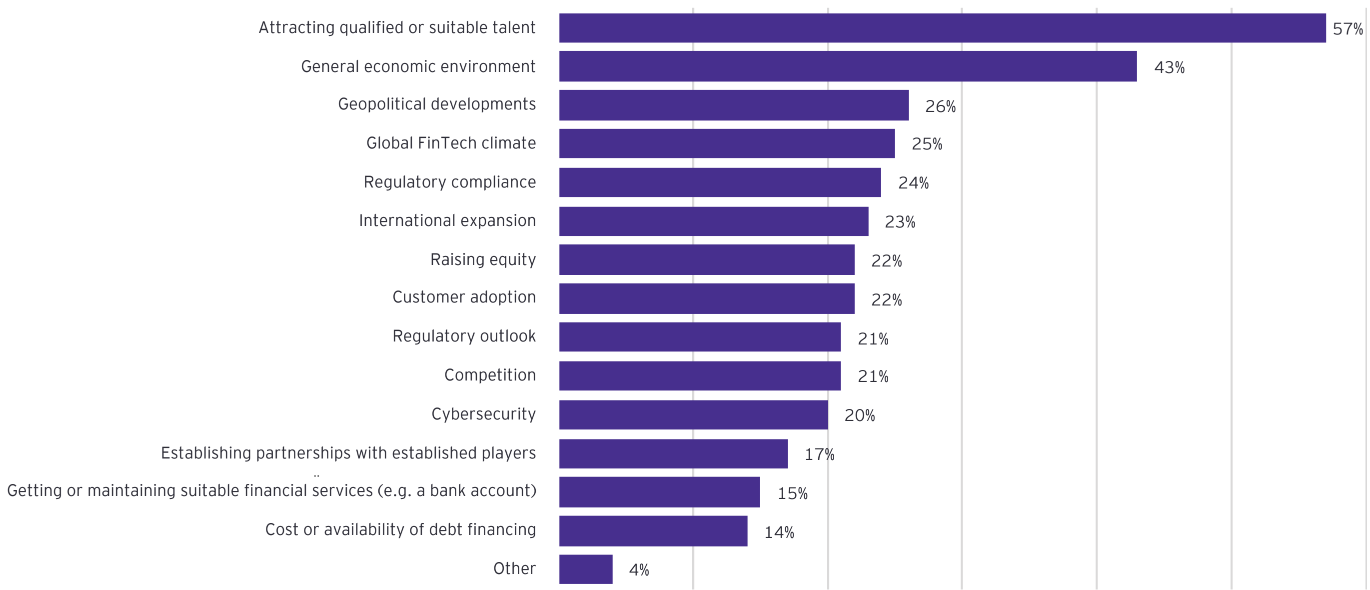


Figure 4. Biggest challenges for FinTech companies (multiple answers possible) (n = 126)

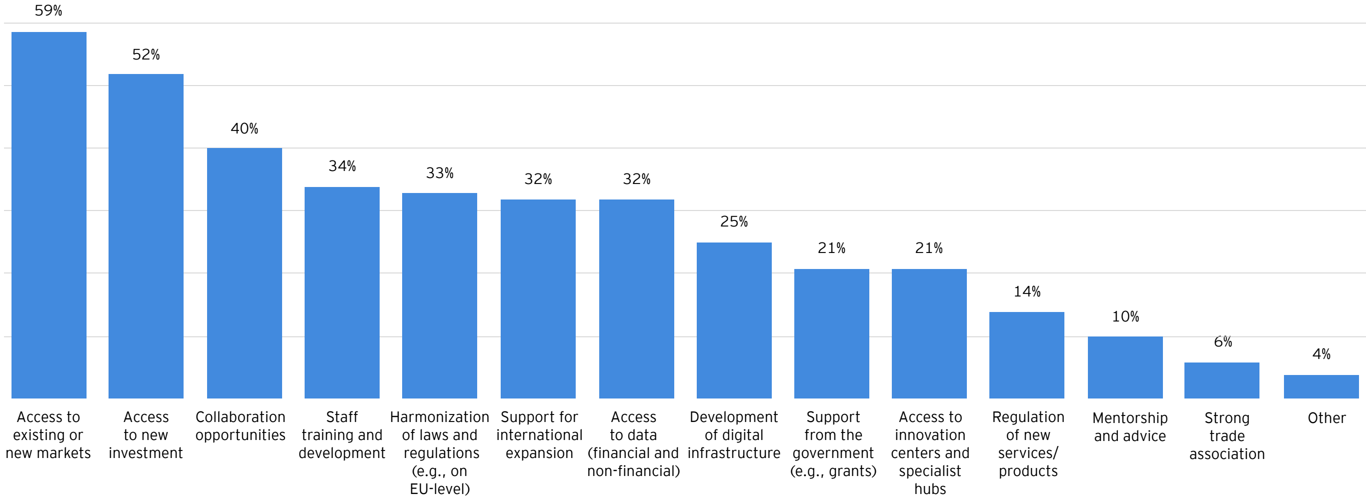


Figure 5. Opportunities for development for the Dutch FinTech sector (multiple answers possible) (n = 126)

3. Dutch FinTech overview

Dutch sector has risen to 861 FinTechs

The share of the FinTech sector in the Dutch economy in 2023 is estimated at approximately € 2.1 billion[22]. In 2016, the sector consisted of more than 200 companies; this has risen to 635 FinTech parties in 2019[23]. By 2023 - despite COVID-19 - 861 FinTech parties were identified during the desk research for this Census (see appendix 1 for the methodology; see figure 6 for the visual representation of FinTech sector development). Of the 635 FinTech companies operating in 2019, analysis shows that 12%, approximately 78 parties, are no longer active in the Dutch market. 62 of these parties have completely stopped offering their services, but there are also several parties that are no longer active on the Dutch market due to acquisitions. The total growth of 304 FinTechs stems from two factors. First of all, 158 FinTechs have been established since the first research. The remaining group were already active in 2019, but were not yet identified in the desk research due to the lower (online) visibility of startups. The changes since 2019 show how dynamic the FinTech sector is. Recent developments illustrate the innovative nature of the sector, which offers opportunities to set up companies, but is also so competitive that not all companies will survive in the long term.

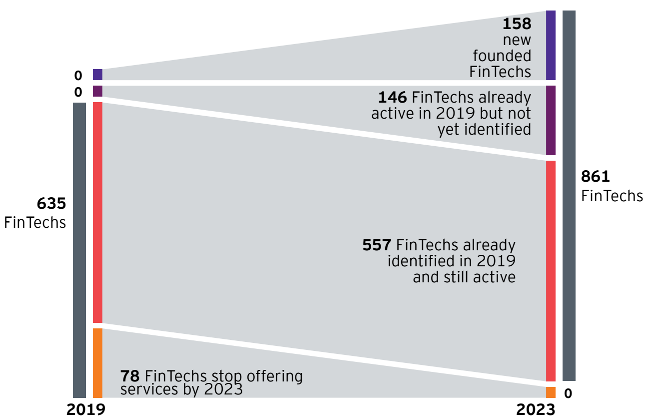


Figure 6. Dutch FinTech parties

“

Agility and flexibility are essential for a healthy innovation system.

[22] Techleap, Netherlands Startup Employment, 2022; Storm2, FinTech market report Netherlands, 2022; EY analysis, 2023
[23] EY, FinTech Census, 2019

3.1 Services of the Dutch FinTech sector

The 861 identified FinTech parties are categorized by main activity. Most FinTechs offer products or services covered by financial software (21%), payments (16%) and RegTech & digital identity (12%). Financial software is an umbrella term that allows many different types of FinTechs to identify with it. Because financial software is integrated into many FinTech services, financial software services are also often affiliated with other types of services such as payments, online investment services or insurance products. Concrete examples of services in which financial software is used are portfolio optimization, insurance administration or accounting solutions. Financial software is supplied directly to SMEs or financial institutions, but also indirectly end customers of financial institutions use it by integrating FinTech solutions into their services (the B2B2C channel).

The payments parties focus on the payment value chain, but also consist of payment facilitators, payment service providers (PSPs), networks that create new payment propositions and providers of payment technology[25]. The payment parties offer these services to financial institutions, SMEs and consumers. While business customers recognize the competitive advantage of easy-to-use, nearly invisible payments, customer demand for frictionless payments is also increasing as the digital economy grows. They are responding to this enormous demand for payment solutions and therefore see opportunities to both expand existing payment methods and launch new ones. Well-known payment methods continue to develop and increase in popularity among users, such as mobile banking applications, E-wallets and self-service payments (such as self-checkouts)[26]. However, many developments are also taking place that are changing the payment landscape. EY's PayTech report identifies seven trends affecting payments, namely: open banking, real-time payments, cross-border payments, buy now pay later, the digital wallet and super apps (where multiple core (financial) services and independent apps come together in one app[27]), embedded payments and central bank digital currencies (CBDCs) and digital currencies[28]. These innovations in payments are expected to scale even further in the future and have a major impact on the digital economy by leading to faster, cheaper and more secure payment methods.

Third in the top three services offered are solutions in the field of 'Regulatory Technology' (RegTech) and digital identity. This includes companies that provide technology-driven solutions to the financial industry to comply with laws and regulations such as Know Your Customer (KYC) and Anti-Money Laundering (AML). FinTechs that fall under RegTech companies also differ in the type of services they offer. RegTech's focus areas include reporting and data analysis, (operational) risk management, AML/KYC, regulatory compliance and cybersecurity[29].

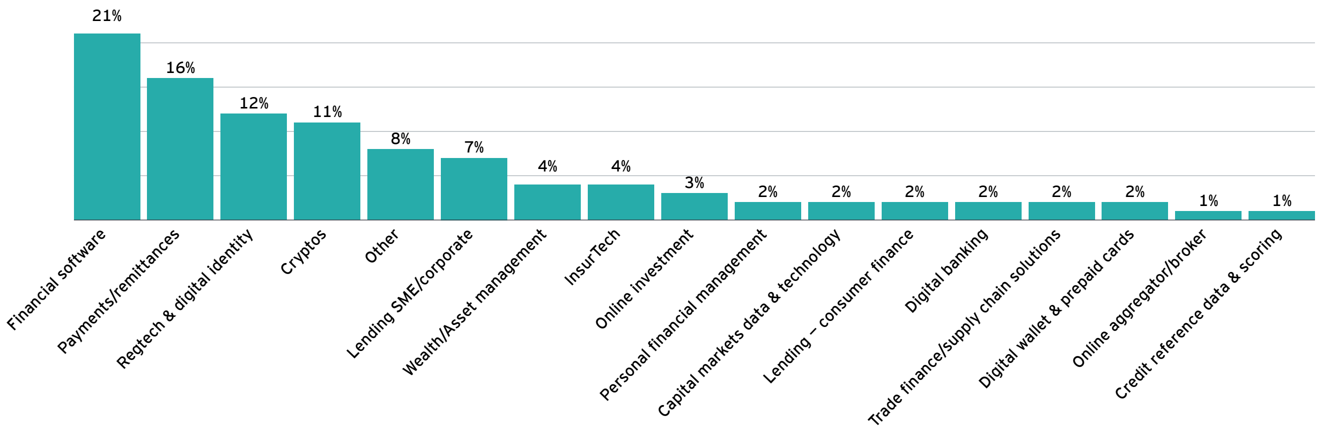


Figure 7. Types of services of the 861 FinTech companies identified [24] (n = 861)

[24] EY analysis, 2023
[25] EY, How the rise of PayTech is reshaping the payments landscape, 2022
[26] Ikgastarten.nl, Dit zijn de trends in betalen, 2023
[27] Gartner, What Is a Superapp?, 2022
[28] EY, How the rise of PayTech is reshaping the payments landscape, 2022
[29] EY, Regulatory technology (RegTech)- navigating the right technology to manage the evolving regulatory environment, 2019
[30] EY, What you need to know now: crypto and digital assets in financial services, 2022

Many of the participating RegTech companies indicate that the increasing regulatory burden offers opportunities for them, because with their services they can support companies in being compliant and keeping the financial system clean. By outsourcing tasks such as identifying customers and companies and combating fraud, companies and financial institutions can focus more on their service portfolio.

The top four types of service are completed by Cryptos (11%). Blockchain technology creates a broad spectrum of new opportunities within the financial sector. Examples include decentralized ways of doing business without intermediaries (decentralized finance (DeFi)), decentralized autonomous organizations (DAOs)), and new digital assets, such as cryptos, tokens (e.g., commodity or utility tokens), stablecoins, and non-fungible tokens (NFTs)[30]. FinTech parties are responding to this, with the largest focus area being in crypto platforms.

Finally, there is also a group consisting of approximately 8% of FinTechs that are not easy to place in the defined service types. These are mainly FinTechs that respond to niches in the market, which are not yet widely served by financial innovations such as spending management and mortgage technology.

The top three FinTech services are in line with 2019, with the biggest increase in crypto.
Also in 2023, financial software and payment transactions are in the top three of offered FinTech services.

Business lending has left the top three as one of the biggest decliners since 2019, due to a consolidation within this subsector among parties such as crowdfunding providers (see figure 8)[31]. The largest increases have been measured in 'Cryptos' and 'Financial software'. As described, these subsectors include multiple focus areas in which FinTech parties respond to financial innovations. Interviews show that crypto is getting a lot of media attention due to enormous price volatility and bankruptcies, which leads to curiosity and interest among investors. As mentioned in interviews, the increased demand and lack of license requirement (at the moment there is a registration regime under the Wwft) has contributed to the growth of crypto parties. Finally, big data & analytics, blockchain and AI are not included as service types in the 2023 Census. The reason for this is that these categories indicate more which technology is used than which type of service is being offered.

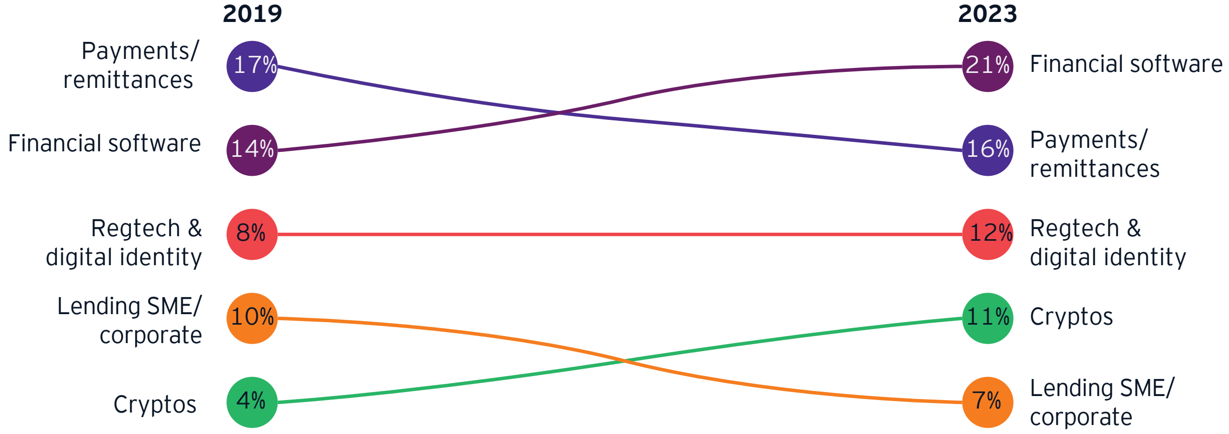


Figure 8. Evolvement in type of service since 2019[32] (n = 861)

[31] Crowdfundingcijfers.nl, Crowdfunding in Nederland 2021, 2021
[32] EY analysis, 2023

3.2 FinTechs' maturity

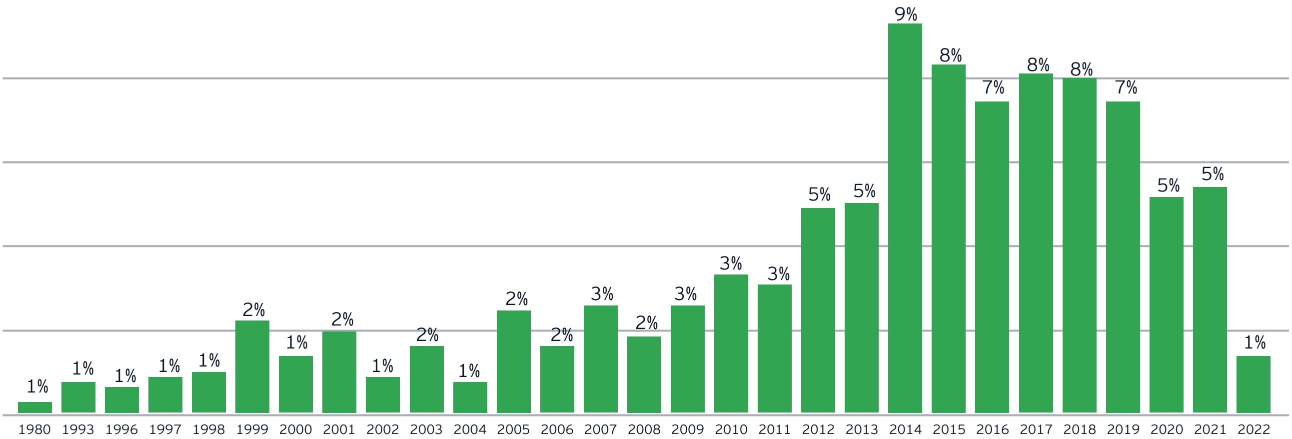


Figure 9: Year of foundation[34]

The number of FinTech companies has increased sharply since previous decades. Of the 861 FinTech companies identified in 2023, the average age of FinTechs operating in the Netherlands is 12 years. Figure 9 shows that most FinTechs were founded in the year 2014: 9% of the total number of FinTechs identified. The emergence of independent FinTech companies started between 2012 and 2014. FinTechs established prior to 2012 are usually part of an established player. Initially, financial institutions saw FinTech companies as competitors, but over time began to see collaboration opportunities , such as leveraging underlying FinTech services for a frictionless customer experience[33]. This growth of FinTech companies can be seen in figure 9 between 2012 and 2014, after which FinTech companies saw an opportunity to become a substantial part of the financial sector and the FinTech sector became increasingly well known.

After huge expansion in 2014, the number of FinTech companies continued to grow at a constant pace, but less rapidly than in 2014. In 2020, the number of newly established FinTechs decreased due to the COVID-19 pandemic.

Since the 2019 edition of the FinTech Census, 158 new FinTech parties have been established, with the largest increase being in 2019. Those companies had not yet been identified in the previous Census because they were still in the startup phase and were not yet visible. Just before the COVID-19 crisis started, the Dutch economy grew and the number of Dutch companies reached a record number[35]. The more cautious attitude resulting from the start of COVID-19 is reflected in the declining number of FinTechs starting up in 2020. In 2021, the confidence of entrepreneurs increased again and more FinTechs started in crypto, payments and financial software.

[33] EY, Collaboration at the core: evolving partnerships between banks and FinTechs, 2021
[34] EY analysis, 2023
[35] Kamer van Koophandel, Grens 2 miljoen ondernemingen in Nederland gepasseerd, 2020

3.3 Organizational form

In terms of organizational form, a clear majority (91%) of the identified FinTechs are independent companies (see figure 10). Driven by entrepreneurship and the vision / mission of the company, there seems to be a strong preference to operate independently and to be able to make autonomous choices. Approximately 8% are part of another company. These parent companies have a Wft license (4%), are providers of technology (3%) or are part of BigTech (1%). For example, the 1% of FinTechs with an organizational form of 'Others' include parties that are part of a joint venture or a foundation.

FinTechs operate more independently within the financial sector

Compared to 2019, the percentage of independent companies has risen sharply from 79% to 91%. This can be explained by several factors. Where, for example, a link to an established player initially provided a seal of trust, consumer confidence has since risen and FinTechs experience less challenge in forming partnerships. In addition, greater availability of capital due to the favorable investment climate[36] may have made FinTechs less compelled to become part of another company (see Chapter 7 for more details). Even among established players with affiliated FinTech parties in 2019, many of these parties have since independently moved on, stopped providing services or have been fully integrated within the services of the established player.

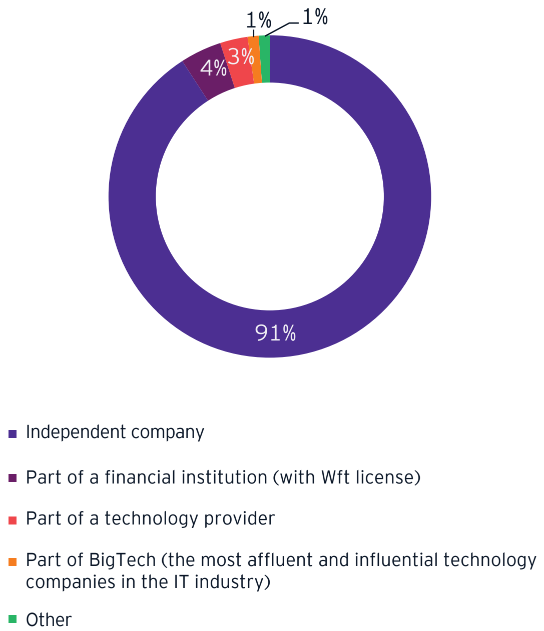


Figure 10: Organizational forms of FinTechs[37] (n = 861)

[36] Dialogic in opdracht van de overheid, Het Nederlandse investeringsklimaat, 2021
[37] EY analysis, 2023

3.4 Location of FinTechs

78% of the identified FinTechs are headquartered in the Netherlands. The other 22% are active in the Dutch market with a branch but have their headquarters elsewhere. The origins of international FinTechs are widespread, with headquarters in all continents (see figure 11). Of these, 7% are headquartered in the United States, followed by neighboring countries such as the United Kingdom (4%) and Belgium (2%).

In the Netherlands, Amsterdam stands out as a FinTech hub. 40% of Dutch headquarters are located in the capital, followed by Rotterdam (8%), Utrecht (6%) and The Hague (6%). The interviews show that Amsterdam is an excellent location for attracting (international) talent. The pleasant living and working climate and the international culture that prevails contribute the most to this.

The popularity of Amsterdam as a location for FinTech company headquarters has increased from 32% in 2019 to 40% in 2023. Furthermore, in line with 2019, the largest concentration of FinTechs can be found in the Randstad (an area comprising of Amsterdam, Rotterdam, The Hague, and Utrecht), see figure 12.

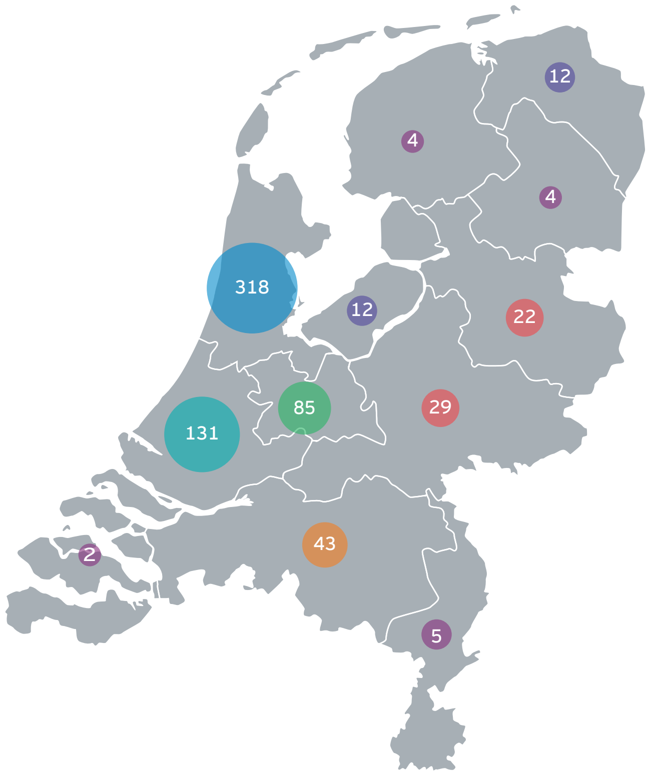


Figure 12. FinTechs locations headquartered in the Netherlands (n = 667)

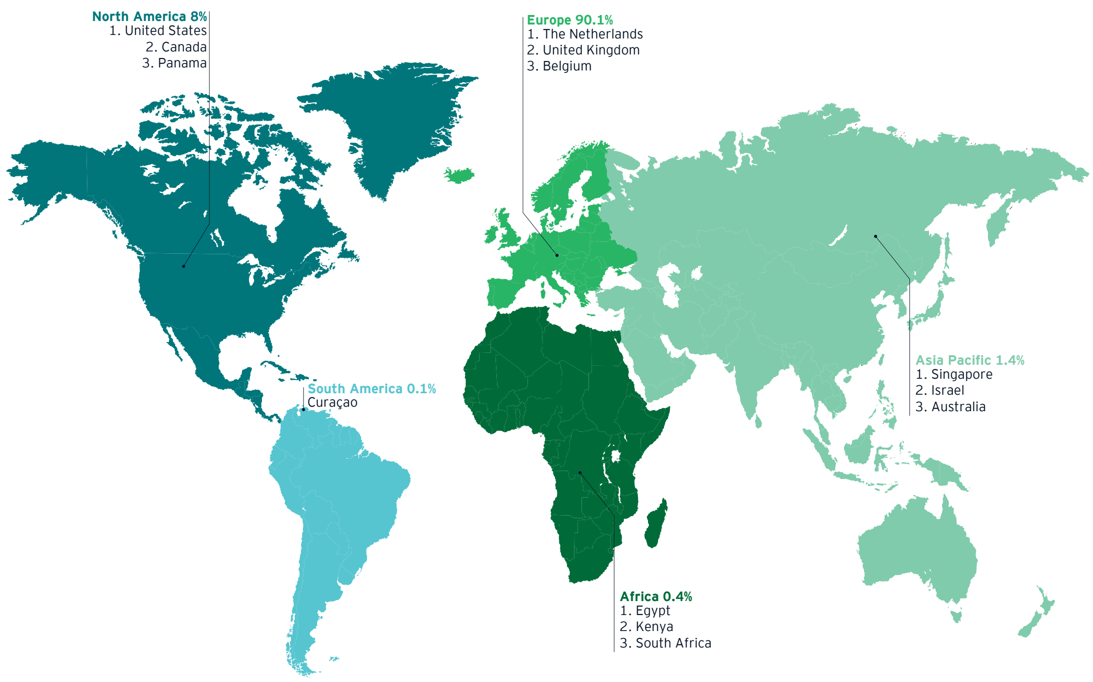


Figure 11. Global locations of FinTechs operating in the Netherlands, top three countries per continent (n = 861)

4. Demand, use and target group of FinTech services

The demand for FinTech services has increased further since 2019, partly because the COVID-19 pandemic was a catalyst for the further digitization of society, the increased use of financial technology and a growth in consumer acceptance. Furthermore, FinTechs have become less dependent on established players in the provision of services due to increasing market demand.

This chapter highlights the demand for FinTech products and services (the amount of products and services needed), examining what types of customers use the services, why demand is evolving and how FinTech companies are positioning themselves within the wider financial landscape.

Promoting factors:

- **COVID-19 impact:** The COVID-19 pandemic has brought more and faster innovation in digitization and automation in the financial sector
- **Digital infrastructure:** The country's good digital infrastructure attracts FinTechs to the Netherlands; internet and data infrastructure are the key basis Fintechs need to offer digital technologies.
- **Adoption of FinTech products and services:** The high acceptance rate and high degree of digitization of Dutch society creates an attractive market for FinTech products and services for both B2C and B2B(2C) and promotes growth

Limiting factors:

- **Future growth potential:** Although the adoption rate of FinTech products and services is high, the future growth prospects in the Netherlands are low due to a relatively small sales market
- **Risk aversion:** Small FinTech parties find it challenging to be seen as credible parties by banks and consumers, which hinders their growth
- **Partners in collaborations:** Where FinTechs focus more on collaboration in ecosystems, finding suitable partners is a challenge

4.1 COVID-19 as a catalyst for innovation

Since the last Dutch FinTech Census (2019), the sector has weathered the COVID-19 pandemic. Initially, it was expected that COVID-19 would have a major impact on FinTechs, partly due to diminishing opportunities to raise capital. Indeed, COVID-19 tested FinTechs' business continuity and operational resilience due to uncertainties around finances, business models, customer behavior, regulatory responses, and talent. However, the figures show that the impact has been limited. Since 2019, 158 FinTech parties have been set up, while CBS saw more business closures than ever in the first half of 2022[38]. The survey also identified COVID-19 as the least challenging factor when looking ahead to the biggest challenges for 2023. The current state of the FinTech sector after the COVID-19 pandemic reflects its robustness and resilience.

A positive consequence of COVID-19 is that more and faster innovation in digitization and automation has taken place in society. For example, the launch of new technologies and innovations and their adoption by consumers and businesses have accelerated. Research shows that the share of digital products in companies' offerings has accelerated by seven years, and it is three times more likely that at least 80% of customer interactions are digital than before the crisis[39]. COVID-19 has brought about a shift towards a more digitally oriented society, where, in addition to consumers, the majority of SMEs now expect to communicate with financial institutions through different digital channels[40]. Financial institutions are responding to this shift with more digital business models using FinTech solutions, increasing consumer and business demand for FinTech products and services. In addition, FinTechs can also play an important role in supporting the banking and financing needs of SMEs, many of which have been affected by the pandemic and are in the recovery phase[41].

The quality of Dutch digital infrastructure contributes to the realization of rapid digitization. Digital infrastructure is cited as the most attractive factor of the Dutch market (83%), mainly due to the quality of the internet and data infrastructure. The Netherlands is in the top three of the Digital Economy and Society Index (DESI), which ranks European countries based on, among other things, digital infrastructure, the supply and use of digital solutions and the digital literacy of society[42]. This means that the Netherlands has a cross-border reputation as a country where innovative services can be developed and rolled out.

International example

Due to the increase in contactless payments at the time of COVID-19, the consideration for a digital currency from the central bank (e-krona) has accelerated in Sweden. Sweden is currently in the second phase of a pilot for the digital Swedish krona implementation, a study driven by the Swedish Riksbank since 2017. In this phase, the focus is on the technical platform for setting up and testing the e-krona. This examines how a digital currency could replace cash and the degree of future-proofing of the e-krona. Riksbank is also investigating how the e-krona could strengthen Sweden's (digital) payment infrastructure. No political decision has yet been taken on the issue of the digital Swedish krona[43].

[38] CBS, Hoogste aantal bedrijfsopheffingen sinds 2007 in het eerste halfjaar, 2022
[39] McKinsey, How COVID-19 has pushed companies over the technology tipping point – and transformed business forever, 2020
[40] EY, The five-step journey to SME banking transformation, 2021
[41] EY, UK FinTech: Moving mountains and moving mainstream, 2020
[42] European Commission, Digital Economy and Society Index (DESI), 2022
[43] Invest Stockholm, Stockholm FinTech, 2021

This does not mean that COVID-19 has not had a negative impact on the sector in recent years. The increased volatility of the market[44] has also had an impact on the FinTech sector due to the significant increase in consumer savings and lower spending volumes. For example, average household spending fell by almost 3% in 2020 compared to 2015, while average income increased by 13% in 2020[45].

Moreover, most of the financial sector was excluded from government support measures related to COVID-19[46] (for example, the business sectors financial institutions, insurance and pension funds and other financial services could not claim the Fixed Costs Allowance[47]), and rising interest rates generally made it more difficult to raise capital.

[44] De Nederlandsche Bank, Spaargeld huishoudens, 2022
[45] CBS, Coronacrisis drukt bestedingen buitenshuis, meer uitgaven voor thuis, 2022
[46] Rijksoverheid, Overzicht steun- en herstelpakket, 2023
[47] Rijkdienst voor Ondernemend Nederland, Voorwaarden Tegemoetkoming Vaste Lasten (TVL), 2021

4.2 FinTech usage

Target groups of FinTech services

The majority of Dutch FinTech companies are B2B organizations that serve business customers. Figure 13 shows that the largest target groups in 2023 are small and medium-sized enterprises (SMEs) (28%), financial corporate institutions (21%) and non-financial corporate companies (18%). This result corresponds to the aforementioned impact of COVID-19, with companies adopting digitization and increasingly using FinTech products and services. Moreover, offering B2B services is an attractive way for FinTechs to expand their reach by offering both direct (B2C) and indirect (B2B2C) services, ultimately leading to economies of scale for FinTechs. The results of the FinTech Census 2023 are in line with the results of the FinTech Census 2019, where the FinTechs also focused on financial institutions (27%), SMEs (24%) and consumers (13%).

Only 13% of Census respondents offer products directly to consumers. Despite this relatively low percentage, it is an important market due to the B2B2C services. An important indicator of demand for FinTech services is consumer confidence and adoption. In 2019, Dutch consumer confidence in FinTechs was reflected with EY's Global FinTech Adoption Index[48], which ranked the Netherlands as a leader in Europe with an acceptance rate of 73%. FinTech is now an established sector in the financial sector and the global acceptance of FinTech services has reached such a high level that the research is no longer being conducted. For example, the acceptance rate for customer interactions increased from 36% to 58% from December 2019 to July 2020, a three-year acceleration in adoption[49]. The increased media attention contributes to greater consumer acceptance of digital solutions that are gaining popularity in the financial markets. In addition, the FinTech sector has become more professional in risk management, including through close cooperation with regulators and the establishment of strong industry associations[50].

The Trust Survey by De Nederlansche Bank (DNB; Dutch Central Bank) shows that consumer trust in financial institutions remains stable despite economic and geopolitical developments. 51% of respondents indicate that they will have a reasonably high or very high trust in financial institutions by 2022[51]. Interviews with FinTechs show that the customer base is growing and that consumers are embracing FinTech solutions.

The adoption rate of FinTech products and services is high among both consumers and companies, but the future growth prospects in the Netherlands are modest. This is mainly because the Dutch sales market is relatively small, making it difficult for FinTechs to scale up. The opportunities and challenges of international expansion are described in Chapter 2.

In addition, 15% of FinTech companies serve public and non-profit organizations. This has risen sharply since 2019, when only 8% of FinTech companies indicated that they focused on these organizations.

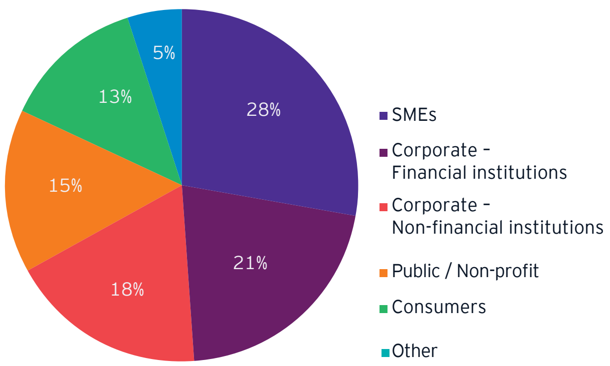


Figure 13. Target groups of FinTech companies (multiple answers possible) (n = 126)

[48] EY, Global FinTech Adoption Index, 2019
[49] McKinsey, How COVID-19 has pushed companies over the technology tipping point - and transformed business forever, 2020
[50] Finance Innovation, FinTech-innovatie verdient meer vertrouwen, 2020
[51] De Nederlandsche Bank, Trust survey, 2022

FinTechs in ecosystems

Due to the aforementioned increased market demand, FinTechs are less dependent on serving established players in the financial sector. For example, entering into partnerships with financial institutions is rarely seen as a challenge. Only 18% of FinTechs see partnering with financial institutions as a challenge (see figure 4). The increase in consumer acceptance is an indication that FinTechs have become more independent and can stand on their own feet. This has fundamentally changed the perspective of stakeholders within the financial sector.

Initially, financial institutions viewed FinTech companies as competitors, but FinTechs' ability to solve structural challenges arising from complex business and organizational models has increased the interest of financial institutions[52]. As a result, a more partnership-oriented view of FinTechs is being adopted. Partnering with FinTech players can give financial institutions a strategic advantage, potentially increasing market share and improving performance[53]. Moreover, the COVID-19 pandemic has made digitization and automation even more important, forcing financial institutions to bring these digital solutions to market faster. Cooperation between FinTechs and financial institutions therefore became more necessary.

However, the extent to which entering into partnerships with established players is seen as a challenge varies depending on the maturity and scale of the FinTech. Smaller and younger FinTechs report having a harder time finding their place in the ecosystem because of risk aversion among established players and consumers. Market adoption is a barrier for these FinTechs, making it difficult for smaller players to achieve economies of scale.

[52] EY, Collaboration at the core: evolving partnerships between banks and FinTechs, 2021
[53] EY, How investors and financial institutions can connect with FinTechs, 2022

Collaborating with established players in the financial sector emerged as the second biggest challenge for FinTech companies in 2019 (43% cited forming partnerships with established players as a challenge). The small decrease in financial institutions as a target market in Chapter 3 does not lead to an increase in the number of collaborations. As mentioned earlier, FinTech parties nowadays operate more independently.

FinTechs work more actively together in ecosystems

FinTechs also indicate that they benefit from entering into strategic partnerships to build an ecosystem around them. Instead of working together with one party, which was highly desired in 2019, FinTechs see the added value in entering into multiple partnerships to integrate with ecosystems. It is striking that other FinTechs are also being sought to develop stronger solutions for customers, to strategically outsource tasks and to use obtained licenses from other FinTech parties. In addition, FinTechs say they benefit from partnerships to increase their income. Especially as a starting, smaller party, it is considered advantageous to enter into collaborations with other FinTech parties. This enables them to combine services and thus stand stronger.

Interviews with FinTechs show that it is important to find suitable parties that fit their culture, size and knowledge. Finding the right partners is therefore seen as a challenge by FinTechs. According to FinTechs, collaboration involves a lot of regulation and paperwork, so an informed decision must be made for the collaboration to be effective.

International example

German parties are working together to support FinTechs and to put Germany on the map as a FinTech country with several regional hubs.

In Germany, cross-sector B2B FinTechs reinforce each other through a growing customer base and the sharing of (acquisition) costs. In addition, there are facilitating organizations in Germany (Accelerators, Incubators, company builders) that are committed to the growth of FinTech startups through financing, among other things. For example, the German Accelerator, supported by the Ministry of Economic Affairs and Climate Policy, guides startups in scaling up their business and setting up various regional digital hubs (for example, Berlin and Frankfurt as FinTech hub, and Cologne and Munich as InsurTech hub). In addition, specialized FinTech VC funds have emerged in recent years, which offer multiple financing options in all phases. Although larger exits (over €100 million), whether it's an IPO or buyouts, remain scarce and have yet to take place[54].

[54] German Trade & Invest, FinTech in Germany, 2023

5. Talent and skills

Having a good workforce is crucial to the success of a business. In addition to the availability of personnel, the right qualifications also play an important role. This certainly also applies to FinTechs. Attracting the right talent is one of the biggest challenges FinTechs face. This is especially true for technical profiles such as software developers and data scientists. Retaining talent is also difficult for FinTechs, where especially remuneration policies and competition are bottlenecks. FinTechs are also highly motivated to grow. 80% of the FinTech parties indicate that they want to grow in the number of employees in the coming year.

This chapter focuses on attracting and retaining talent and discovers which factors FinTechs experience as promoting or hindering.

Promoting factors:

- **Quality of education:** The Netherlands generally has high-quality and internationally oriented educational institutions, which means that talent is relatively well educated
- **Working atmosphere and culture:** The open and innovative working atmosphere at FinTechs makes the FinTech sector attractive for much (young) talent to (continue to) work in
- **International talent:** The Netherlands is an attractive country for expats due to a pleasant living and working climate, the 30% ruling and the international culture

Limiting factors:

- **Tech skills:** There is a limited range of studies focused on the technological skills needed within FinTech such as software development, data science and cybersecurity
- **Housing:** The housing shortage in the Netherlands prevents international talent from settling here
- **Remuneration policy:** Tax regulations restrict startups and scale-ups from rewarding staff in the form of options or shares. In addition, FinTech parties are sometimes restricted from offering flexible salaries of, for example, sales employees due to the applicable bonus ceiling in the financial sector
- **Competitive market:** BigTech and established players can often offer better salaries and benefits than FinTech parties, leading to difficulty in attracting and retaining talent

5.1 Developments in organizational size

As indicated in the introduction of this chapter, the availability of sufficient and qualified personnel is crucial for FinTechs. Most FinTechs have relatively few employees. For example, 28% of FinTechs have a maximum of 10 employees and the majority (40%) employ between 11 and 50 employees (see figure 14). Only 12% of FinTech companies consist of large organizations, with more than 250 employees.

The number of FinTech employees has increased since the last FinTech Census. In 2019, most FinTechs had between 1 and 10 employees, in 2023 most FinTechs have between 11 and 50 employees. In addition to the increase in the average number of employees at FinTech parties, the number of FinTech companies has also increased and there is an increase in the number of FinTech jobs in the Netherlands. This increase in the number of FinTech employees indicates a growing contribution to the Dutch economy. This is confirmed by the Global FinTech Talent Report, which states that the number of FinTech jobs in the Netherlands is increasing by 117% annually[55].

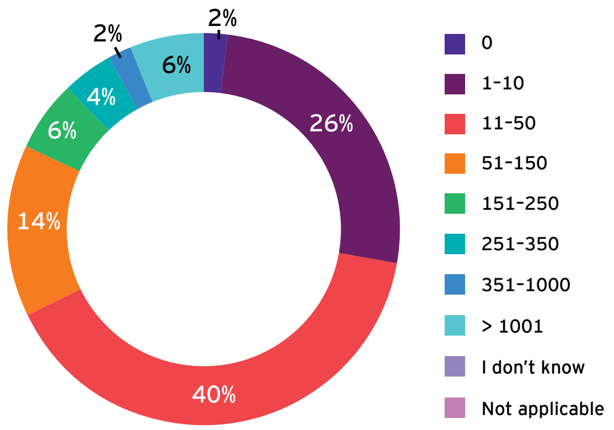


Figure 14. Number of employees employed by FinTechs (n = 126)

FinTechs have big ambitions for future growth. About 80% of FinTech companies expect to hire staff by 2023 (see figure 15). 59% of these plan to hire 1-10 employees. In addition, expectations for the relative growth of personnel are high. 80% of FinTech companies with fewer than 10 employees expect to hire between 11 and 50 employees in the coming year, which means at least a doubling of the workforce.

The expected increase in staff is related to the increased demand for FinTech services and products (see Chapter 4) and the expected revenue growth. 64% of FinTechs indicate that revenue grew in 2022 compared to 2021, as shown in figure 25.

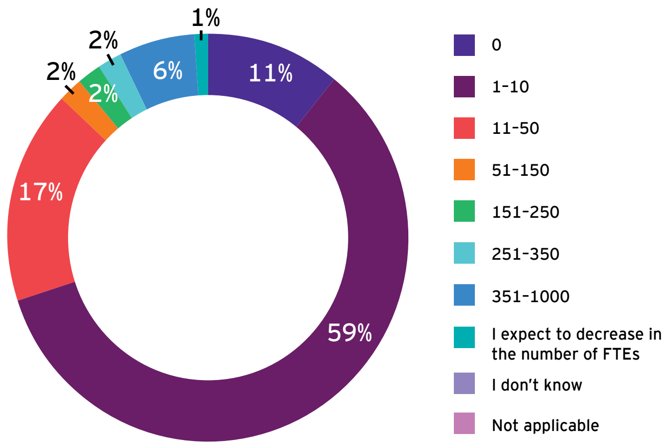


Figure 15. Employee growth forecast for 2023 (n = 126)

[55] Robert Walters, Global FinTech Talent Report, 2022

5.2 Attracting qualified personnel

The growth of FinTech companies in combination with the current staff turnover ensures a strong focus on finding and recruiting qualified personnel. The limited supply of staff with the right skills is slowing down the growth of FinTechs. The biggest challenge that FinTechs experience in 2023 is attracting qualified personnel (see figure 4). This shortage of personnel is caused by several factors, including an ageing population and catching up in the personnel market after COVID-19[56]. Only 15% of FinTech companies say they can easily find qualified employees, and 23% say they are able to hire suitable people (see figure 16).

Recruitment challenges are not expected to reduce in the future. Only 35% of FinTechs see sufficient opportunities to recruit qualified personnel in the future. The offer of suitable profiles is small and the competition on those profiles is great. Although FinTechs indicate that Dutch educational institutions generally produce highly educated talent, the eduction is, according to FinTechs not sufficiently focused on creating the right skills, such as data science and software development. As a result, there are too few graduates with the right skills entering the job market. In addition, the limited size of some FinTechs causes them to look for heavy, senior profiles. Some companies are not yet large enough to train professionals, but are looking for experienced personnel who can carry out the necessary work independently. Moreover, more and more FinTech companies are looking for the same talent, which increases competition between them. The FinTech sector is also facing increasing competition from BigTechs and established financial institutions. BigTech and established financial institutions often have a more prominent place in the market and offer more attractive rewards.

FinTechs are looking more negatively at their ability to find qualified talent in 2023, particularly due to increasing labor shortages, survey responses show. 22% found qualified personnel in 2019 without any problems compared to 14% in 2023. Given the increasing tightness in the labor market, this may become even more difficult in the future.

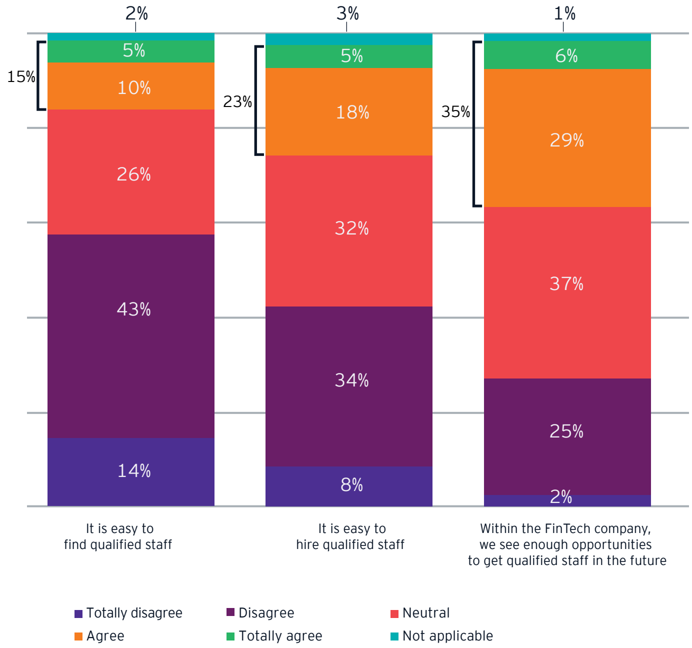


Figure 16. Personnel experience (n = 126)

[56] UWV, Oorzaken krapte op de arbeidsmarkt, 2022

> The Netherlands is leading the way in FinTech, but the resulting huge demand for technical profiles is disrupting the labor market.

In line with 2019, the highest demand is for software developers and data profiles

The Netherlands ranks seventh in the world in terms of employee skills in business, technology and data science, but filling professional positions remains a major obstacle to the growth of FinTechs[57]. The biggest demand from FinTechs is software developers (figure 17). Other research also points to this need, showing that software developers make up a fifth of FinTech jobs[58]. In addition to the need for digital skills, number three is the demand for commercial skills to market products and services. The challenge here is that a profile as an account manager requires not only commercial skills, but also some knowledge of the technology to sell. FinTechs indicate that this combination is difficult to find. 'Cybersecurity and IT security' and 'System architecture and platforms' (in line with digital skills) are also among the top five scarce skills. With the increased use of Cloud technology and the increase in cyberattacks, the lack of cybersecurity skills is not surprising[59].

> The FinTech world requires specialized knowledge in which different skills must come together: knowledge of software but also of relationship management.

[57] Coursera, Global Skills Report, 2022
[58] Robert Walters, Global FinTech Talent Report, 2022
[59] Nationaal Coördinator Terrorismebestrijding en Veiligheid, Cybersecuritybeeld Nederland, 2022

The top three hardest to find profiles in 2023 are the same as they were in 2019. It remains important to pay attention to and invest in improving the availability of these skills, in order to ensure that the Netherlands retains the high-ranking position around talent in the top ten[60]. The shortage of these profiles also prevails outside the FinTech sector. In February 2023, five sector organizations therefore took the initiative to draw up a 'Plan of attack on chronic shortages of ICT professionals' and to hand it over to the Ministry of Economic Affairs and Climate Policy. The intended purpose is to give direction and contribute to the government's Green and Digital Jobs Action Plan. They also expressly invite other sectors in which many ICT professionals work to form an open coalition and tackle the intersectoral shortage of ICT professionals[61].

International example

Lithuania expects an influx of a total of 19,000 specialists required over the next three years through an active retraining policy

The Lithuanian Ministry of Economy and Innovation prioritizes and ensures a continuous influx of multidisciplinary talent with the National Requalification Program. Innovative training programs focus on specific skills such as Cyber Security, Cloud Computing, AI, Automation, Robotics and Data Science. In addition, Lithuania has experienced annual growth of around 2,300 IT graduates over the past three years, mainly due to government-driven initiatives promoting IT careers[62].

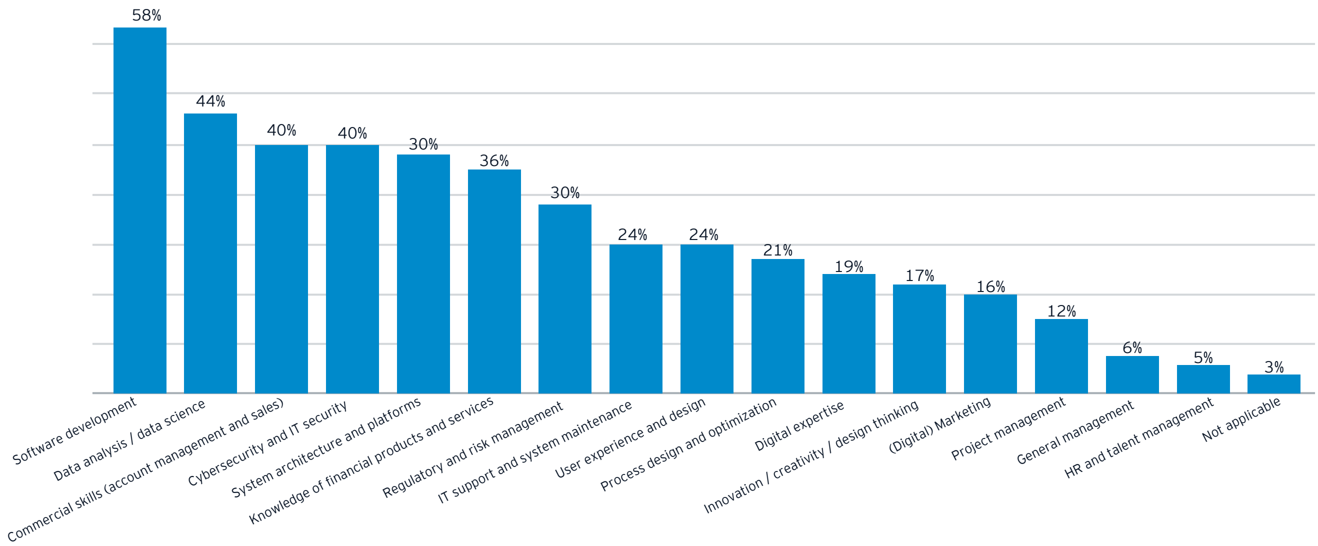


Figure 17: Most challenging skills to find (multiple answers possible) (n = 126)

[60] Robert Walters, Global FinTech Talent Report, 2022
[61] NLdigital, Aanvalsplan chronisch tekort ICT'ers, 2023
[62] Invest Lithuania, FinTech report 2021-2022, 2022

5.3 Attracting international talent

In addition to finding and attracting Dutch staff, it is also possible to attract staff from abroad to come and work in our country. The Netherlands, and Amsterdam in particular, is well positioned to attract international talent. Arguments for expats to settle in the Netherlands are the comfortable living and working climate, tax arrangements for expats and the Dutch international culture. For example, factors such as an internationally oriented society, a good command of the English language and sufficient connection with other international young professionals are prerequisites for foreigners to come and live and work in the Netherlands. The internationally oriented educational institutions also contribute to the influx of international talent.

In addition, the Dutch government is trying to stimulate the growth of international talent. This is beneficial for employers, for example because of the possibility of paying 30% of the salary of international employees tax-free[63] or through special residence permits for highly skilled migrants[64]. This policy helps entrepreneurs by increasing the supply of available (international) talent.

The downside of Amsterdam's appeal is that international talent has to find affordable housing in a tight housing market, forcing entrepreneurs to settle in Amsterdam to meet the needs of young expats. FinTechs face challenges when it comes to guaranteeing quality and involving international employees in organizations where international talent does not move to the Netherlands and works completely remotely, according to interviews with FinTechs. In order to fully integrate into the company, it is desirable that international staff actually move to the Netherlands.

[63] Belastingdienst, Inhoud van de 30%-regeling
[64] Immigratie- en Naturalisatiedienst, Erkenning als referent, 2022

5.4 Retention of qualified personnel

Retaining staff remains a major challenge for FinTechs. 34% of FinTech companies (figure 18) say they have difficulty retaining staff. In particular, the ability to give appropriate rewards plays a key role (56%), see figure 19. This is partly a consequence of the remuneration rules for the financial sector: the law 'remuneration policy financial companies' (only applicable to the FinTech parties subject to a license, 58% of the survey respondents). For example, a bonus cap was set in 2015 to restore trust in the banking sector. As a result, a bonus may not exceed 20% of the fixed reward[65]. Moreover, the distribution of shares as remuneration is limited and can only be sold after five years[66]. This option was popular with startups and scale-ups because they often cannot offer a competitive fixed salary at this stage. However, the current remuneration policy makes this option a lot less attractive, as many (young) employees do not work at the same company for five years[67].

However, on January 1, 2023, the law regarding the recovery of stock options changed in a positive way, especially for startups and scale-ups. Issued options are no longer taxable when issued, but are taxable when the shares received under the option become tradable. In addition, an option has been introduced to allow starting employees to choose whether or not to retain the tax date of (part of) the options they issue upon issuance. This gives employees more flexibility and eliminates liquidity disadvantage for starting employees with options. For publicly traded companies that have issued options to their employees, the taxation of those options[68] remains the same if the shares are tradable. With the change on 1 January 2023, the Netherlands is more in line with what is internationally common as choices for startup, but it is not yet on the rise. In several countries, lower rates of wealth tax than the normal rates of income tax may apply to the disposal of shares acquired with options, if certain conditions are met. In the Netherlands, this is the progressive income tax rate[69].

The remuneration policy puts pressure on flexibility for FinTechs, as it may oblige FinTechs to increase fixed remuneration. This puts significant pressure on personnel costs, while many FinTechs in the startup or scale-up phase do not yet have a strong capital base. Research by TechLeap shows that a more advantageous equity policy that is in line with the United Kingdom, the United States or Sweden can lead to 18% growth in the number of jobs within startups by 2030[70]. However, established players and BigTechs are better able to offer talent attractive salaries. This competition makes it even more difficult for FinTech companies to retain their staff.

> “
> As a young startup, we fall short in (being able to) offer attractive rewards and challenges in work compared to mature companies.

[65] Rijksoverheid, Beloningen financiële sector
[66] Rijksoverheid, Aanscherping beloningsregels financiële ondernemingen treedt in werking, 2022
[67] Robert Walters, Global FinTech Talent Report, 2022
[68] EY, De loonheffingen in 2023, 2024 en 2025, 2023
[69] Rijksoverheid, Landenonderzoek belastingheffing aandelenopties, 2021
[70] Techleap, Netherlands Startup Employment, 2022

In addition to the remuneration policy, offering work-related challenges (14%), flexible working (8%) and meaning in work (8%) are the most important aspects of retaining staff (see figure 19). These challenges have to do with the changing demands of workers' jobs. Young people, for example, are less likely to be involved in organizations for the long term than previous generations. This is supported by research showing that FinTech professionals only work at companies for an average of two years[71]. Furthermore, FinTechs also indicate that the youngest generation on the labor market is no longer only looking for higher salaries, but, for example, for a flexible and pleasant working environment, career opportunities, personal development opportunities (inside and outside the organization) and getting satisfaction and purpose from work. Many FinTechs say they try to meet these needs with an innovative and pleasant working atmosphere.

Retaining talent is more challenging for FinTechs than in 2019, when 22% struggled to retain talent. In particular, the tighter labor market, competition between employers on the labor market and expectations regarding working conditions, especially for young talent, play a major role in this.

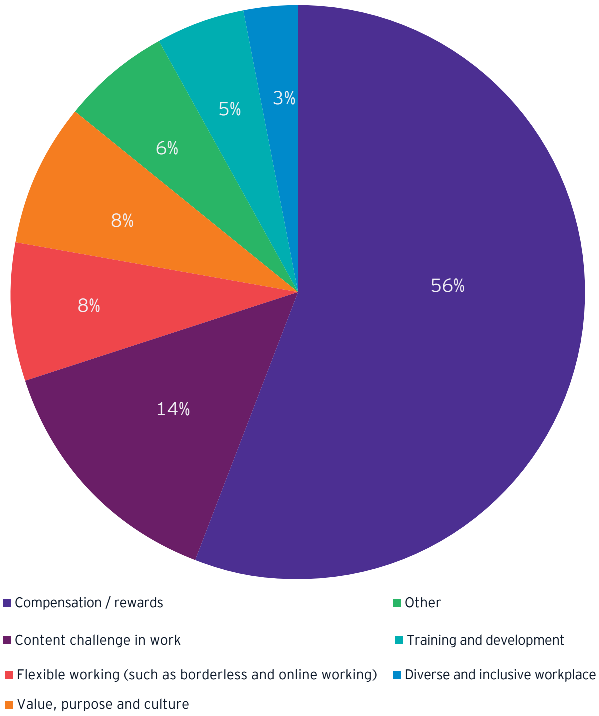


Figure 19. Top challenges in attracting and retaining staff (multiple answers possible) (n = 126)

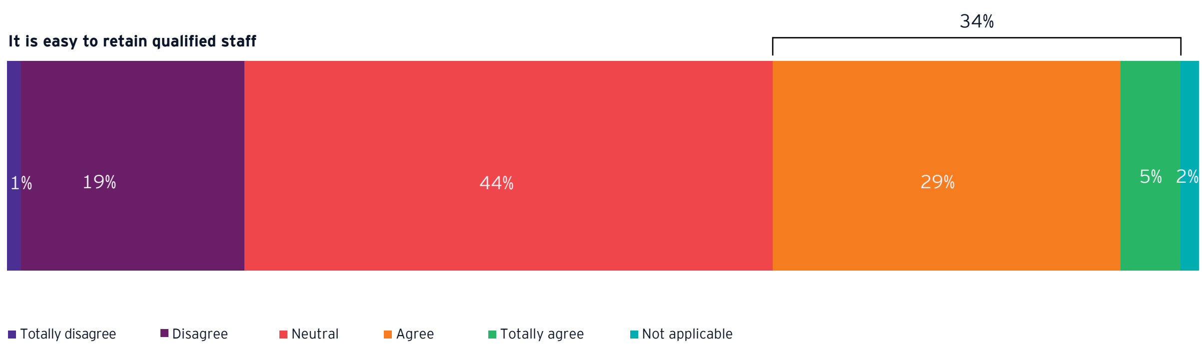


Figure 18. Personnel experience (n = 126)

[71] Robert Walters, Global FinTech Talent Report, 2022

6 Regulation and supervision

Stable economic growth requires a strong and reliable financial sector. Where necessary, governments are working on additional regulation of the financial sector with new laws and regulations. We also have financial regulators who make efforts to prevent abuses in the sector as much as possible. FinTech companies also have to deal with these regulations and regulators, depending on the products or services they offer.

Most FinTech companies experience no problems complying with applicable laws and regulations (62%). The provision of public information plays an important role here. Despite the fact that compliance with the regulations usually works well, the regulatory burden and the resulting costs are perceived as disproportionate. This is especially true for FinTechs that require licensing (58%). The focus of the government and regulators in creating a strong and stable financial sector is to limit possible risks and stimulate the desired behavior of financial institutions. According to many FinTechs, support for innovation in the financial sector is insufficient. More attention and concrete action by the government is needed to facilitate and stimulate innovation.

This chapter describes FinTech within the legal frameworks of the financial sector. The topics discussed below include experiences in the field of legislation and regulations, and the role and attitude of the government and regulators.

Promoting factors:

- **Laws and regulations:** Dutch laws and regulations (including the implementation of European standards) and their supervision are robust and ensure a reliable reputation
- **Information provision:** Good information provision ensures that most FinTechs know how to navigate the landscape of laws and regulations; this has improved since 2019

Limiting factors:

- **Regulatory burden and costs:** FinTechs, especially licensed FinTechs, experience a high administrative burden and high costs to comply with laws and regulations
- **Room for innovation:** The focus of the government and therefore the mandate of the regulator, are focused on keeping the financial system safe and FinTechs experience insufficient room for innovation
- **European harmonization of regulations:** The strict interpretation of European standards creates an uneven playing field between countries
- **Reactive attitude of government:** The government and regulators have a reactive attitude when it comes to innovation within the sector rather than a constructive and proactive attitude

6.1 Experiences with legislation and regulations

Startups and scale-ups within the financial sector are often focused on offering specific services or products to consumers, companies or financial institutions. The Wft supervises financial institutions and the financial system to protect consumers and businesses.

However, as mentioned earlier, the majority do not experience any obstacles in complying with laws and regulations (see figure 20). The parties that have difficulty complying with laws and regulations experience this especially with the current data protection laws (GDPR) and regulations in the context of keeping the financial system clean. The increasing complexity and ingenuity of terrorist financing and money laundering have led to the tightening of applicable rules, including the introduction of the sixth Anti-Money Laundering Directive in 2021[72]. However, regulation also offers opportunities for certain FinTech companies. This is the case for example, in the RegTech domain, where increasing regulatory pressure stimulates the demand for new solutions.

There is clear and sufficient legislation and regulations to provide information

The financial sector is highly regulated, so it is very important to be able to easily find the relevant information. FinTechs positively assess the availability, clarity and quality of information needed in this area, see figure 21. In the Netherlands, 56% of FinTechs agree that the necessary information can easily be found online. For 15%, however, it is not clear which laws and regulations must be complied with or which measures must be implemented. Therefore, the focus must remain on improving the accessibility of information and clarity around applicable laws and regulations. In total, 14% of companies indicated that they have difficulty complying with laws and regulations and 62% indicate that they have no difficulty complying with them, see figure 21.

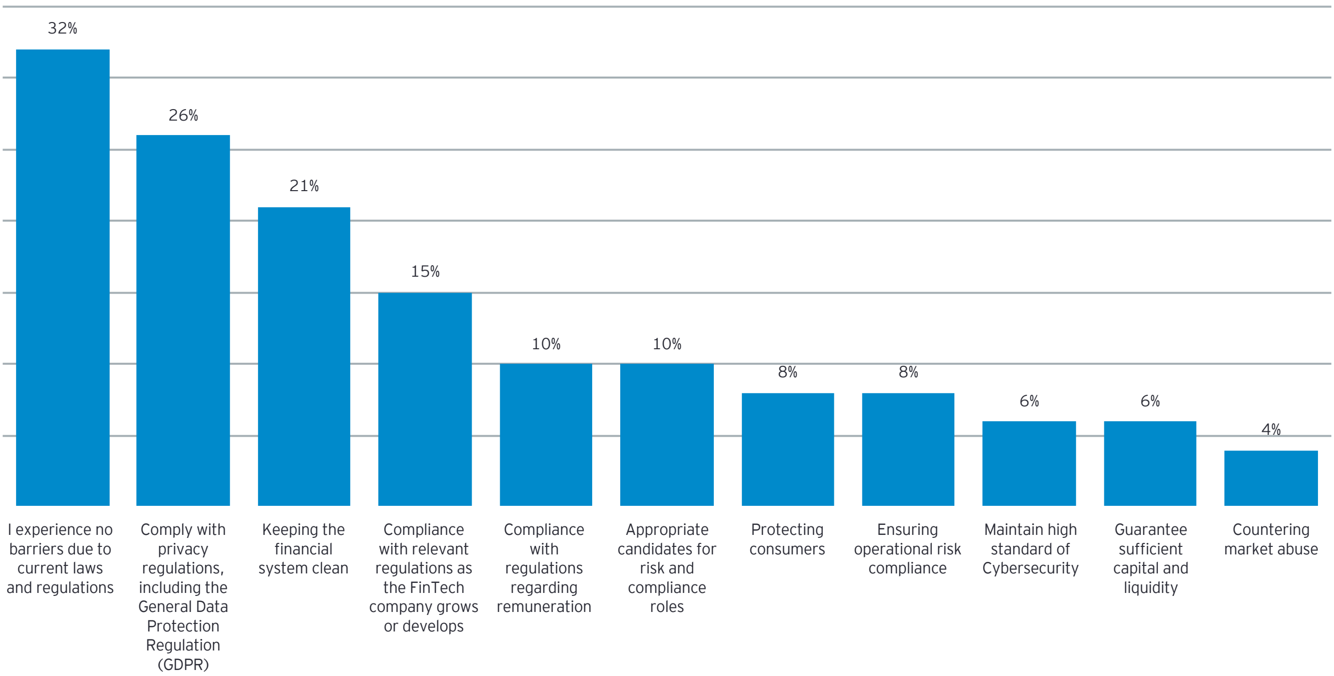


Figure 20. Perceived obstacles due to current laws and regulations (multiple answers possible) (n = 126)

[72] EY, The development of a single Anti-Money Laundering rule book, 2021

The proportionality of laws and regulations is perceived as disproportionate

The financial sector is a highly regulated sector. Supervisors play an important role in this and monitor, among other things, compliance with applicable laws and institutions' financial health. As a result, financial institutions must comply with various administrative requirements, such as reporting, to enable effective supervision. These requirements often depend on the type of license a company has or the nature of the company. Despite differences in the degree of supervision due to the risk-based approach of supervisors, no distinction is made according to size or maturity. This feels disproportionate, especially for FinTech companies, which tend to be smaller. The sector is therefore calling for more proportionate requirements.

This proportionality, or lack thereof, is recognized as the biggest hurdle in complying with laws and regulations. Of all FinTech companies, regardless of whether they are subject to a license, 37% consider the administrative requirements too onerous. In addition to the administrative burden, these requirements also lead to costs. FinTech companies face various costs arising from compliance with laws and regulations. These include both indirect compliance costs, such as personnel costs incurred to comply with laws and regulations, and direct costs, such as costs for ongoing regulation. The total costs weigh heavily, especially for small FinTech parties. Since the requirements are not proportionate, the associated costs are also unbalanced, which has an additional impact on smaller companies where this is often directly at the expense of the innovation budget.

Research (dated November 2022) shows that the costs for the six major Dutch regulators have risen by 73.2% in thirteen years to more than € 788 million[73]. The costs of the Authority Financial Markets (AFM), the Financial Supervision Office (BFT) and DNB account for the largest part of this total amount.

Since the FinTech Census in 2019, the proportionality situation has deteriorated according to FinTech parties. There are many new laws and regulations that need to be complied with that have increased the effort required[74], such as the Sustainable Finance Disclosure Regulation (SFDR) and KYC/AML rules.

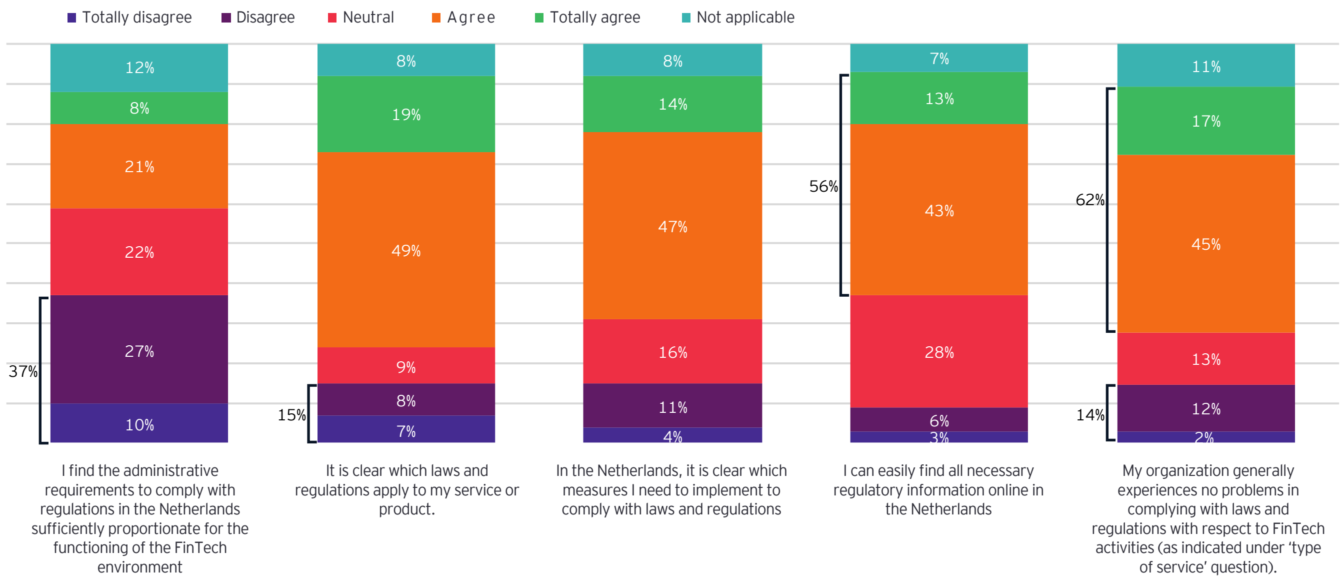


Figure 21. Experience with laws and regulations

[73] Het Financieel Dagblad, Forse stijging toezichtkosten bedrijven, 2022
[74] Banken.nl, Tot 2021 sprake van 374 nieuwe wetten en regels voor financiële sector, 2019

The pressure on FinTech parties as a result of laws and regulations in some cases causes companies to move to another country of establishment, to adjust their proposition or to enter into partnerships with licensed parties in order to reduce their own regulatory burden.

(Lack of harmonized) laws and regulations makes it challenging for FinTechs to grow

37% of FinTech companies struggle to comply with laws and regulations combined with business growth. This is partly due to the administrative pressure that costs time and money, which cannot be invested in growth or development. In addition, there are concrete obstacles to growth, for example when a license is required for a new product or service. Taking the step from a proposition that does not require a permit to a proposition is very large and requires large investments. Testing the proposition is often difficult, which means that the step is seen as (too) risky for many FinTech companies.

> "The biggest barrier for startups is testing a Minimum Viable Product (MVP) with real customers. If a license is needed, the risk, turnaround time and costs are enormous and often not worth it.

The Dutch market is relatively small and insufficient for some FinTech companies. With a 'passport' of the license, these companies can offer their services or products in other countries. However, there are sometimes differences between countries in the interpretation of European standards. This means that FinTechs have to make extra efforts to ensure that their product or service is compliant in all countries. An example of this is the differences in interpretation of MiFID II, such as in the area of provisions for product distribution. Another example is the requirement in the Wft (Art. 2:3b) to have a physical presence in the Dutch market for the provision of payment services where this is not a requirement in PSD2. Better European harmonization would stimulate growth opportunities for FinTechs by creating a level playing field between different countries. This also reduces the risk associated with 'passporting', whereby companies with a license from a European member state can operate on the Dutch market with minimal additional authorization, without having to comply with the Dutch standards package.

> "The barrier for development is not technology but laws and regulations.

FinTechs rate their experiences with legislation and regulations more positively than in 2019

The percentage of FinTechs that say they have no difficulty complying with laws and regulations has increased from 43% in 2019 to 62% in 2023. This can partly be explained by developments in the past year. For example, in line with the FinTech Action Plan 2020, Dutch-language and English-language websites are currently being developed that give FinTechs access to information about regulations and procedures[75].

The share of administrative obligations to comply with laws and regulations is perceived as less proportionate. This is partly explained by the sharp increase in the number of laws and regulations that must be complied with[76].

[75] Ondernemersplein, Uw bedrijf in FinTech registreren en vergunningen aanvragen
[76] Banken.nl, Tot 2021 sprake van 374 nieuwe wetten en regels voor financiële sector, 2019

58% of the participating FinTech parties need a license or registration
In the FinTech sector, a distinction can be made between parties that are supervised by the financial regulators and parties that are not. Despite the fact that FinTech parties operate in the financial sector, a license or registration is not required for all products or services. 58% of FinTech Census respondents require a license or registration for the products or services they offer (figure 22), while 42% do not. In 2019, 45% of participating FinTechs required a license or registration. The license for Payment Institutions is the most common (15%). The Netherlands is an attractive location for payment institutions, partly due to the presence of several major players such as Adyen and Mollie. From a European point of view, the Netherlands is in second place in terms of the number of license applications from payment institutions after Lithuania[77]. This is followed by the license for Electronic money institutions and registration for the crypto service providers (both 6%). Finally, 8% of the institutions have another license or registration, such as the Alternative Investment Fund Managers Directive (AIFMD) light regime registration or a European banking license. It is expected that the number of registrations and licenses will increase further, for example due to the introduction of the Markets in Crypto-Assets regulation (MiCA). Due to the greater involvement of parties with licensing or registration obligations on themes such as policy and regulation, these parties are overrepresented in the group of respondents compared to the entire FinTech sector.

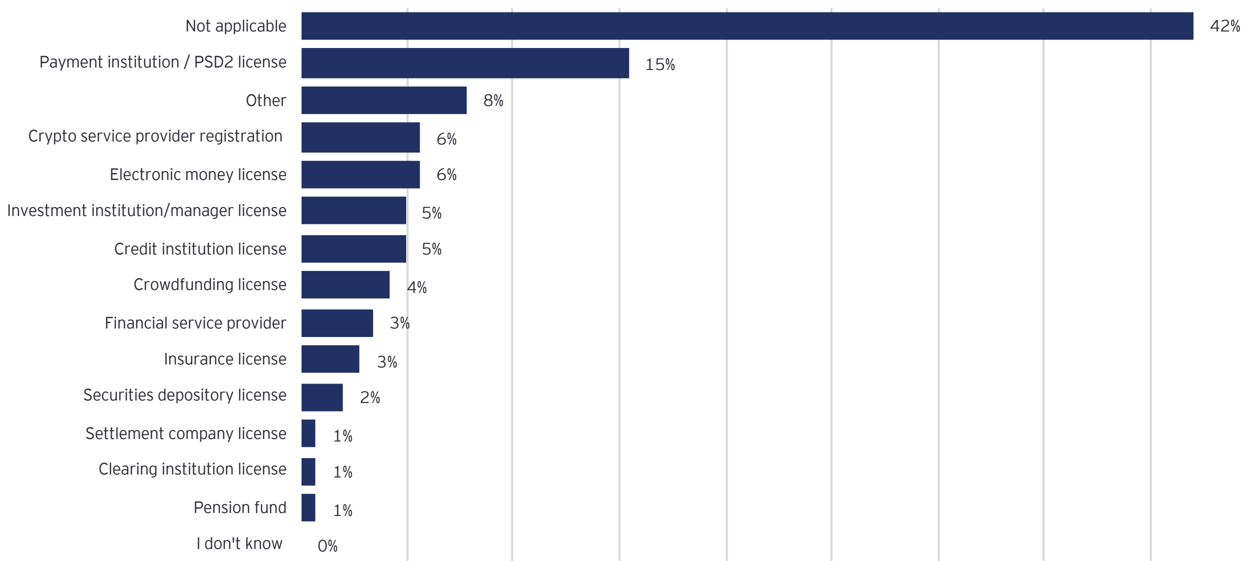


Figure 22. Required license for the FinTech company (multiple answers possible) (n = 126)

[77] European Banking Authority, Peer Review Report on authorisation under PSD2, 2023

6.2 Role and attitude of government

The financial sector is an important sector for society. The sector enables consumers and businesses to pay, save, borrow and insure. It is important that society can rely on the financial sector and that financial markets function clearly and fairly. Governments are therefore closely involved in the sector, including through additional regulations and supervision. The goal is to create strong and healthy financial institutions. Compliance with applicable laws and regulations is important, but the same goes for sector renewal and innovation.

In response to the FinTech Census of 2019, the Dutch government created the FinTech action plan in 2020 to further facilitate and stimulate the FinTech sector. This included several action points to better support the FinTech sector:

- **(Inter)national awareness:** putting the Dutch FinTech climate on the map nationally and internationally by ensuring that Dutch FinTechs can find their way abroad and vice versa, there are sufficient opportunities to raise capital and that consumers can make informed decisions about FinTech
- **Knowledge and talent:** improving access to talent and knowledge by ensuring that FinTechs have access to the necessary information, and that the right talent can be attracted
- **Regulations:** realizing future-proof regulations with room for innovation so that FinTechs can grow (internationally), within a clear and unambiguous legal framework

The October 2021 progress report indicates that most of the measures defined in the FinTech Action Plan have made progress or been fully completed[78]. However, the FinTech Action Plan contained limited measurable goals, making the actual impact difficult to determine. The FinTech action plan has little visibility among FinTech parties and its impact is unknown to the sector itself. Those who were aware of the FinTech Action Plan indicate that more publicity from the government would help. Despite the limited visibility of the FinTech action plan, 38% of FinTech parties believe that the government has a positive attitude towards the FinTech sector (see figure 23). 28% indicate that the government provides sufficient information about relevant laws and regulations for FinTech companies. For a quarter of the respondents, it is clear where they can turn to the government with questions. However, 43% want the government to play a more active role, in the form of concrete measures based on a clear vision and ambition to further stimulate innovation. These results are consistent with the 2019 FinTech Census.

International example

The French government publicly expresses its ambitions & vision for the (Fin)Tech sector, such as President Macron's goal to have 100 French technological unicorns by 2030

As a result of Brexit, the French government has very clearly expressed its ambitions to grow into a leading FinTech market, in order to attract a part of the British FinTech sector. President Emmanuel Macron has set the country a concrete and measurable goal of 100 unicorns (technology startups with a market value of at least a billion dollars) by 2030, after reaching the original goal of 25 unicorns three years ago. That was accompanied by continued government support and regulatory easing that supports startup growth. One example is the Business Growth and Transformation Act 2019, which reduced corporate income tax in France from 33% to 25% and introduced a fixed capital gains tax of 30%[79,80].

[78] Rijksoverheid, Voortgangsbrief FinTech-actieplan, 2021
[79] Planet Compliance, A look into France's FinTech Ambitions and its Regulatory Framework
[80] FinTech Collective, The Land Of Love… And 100 Unicorns?, 2022

International example

Singapore uses FinTech and Innovation as building blocks to realize the ambition of a smart nation

The Government of Singapore sets clear ambitions with regard to its FinTech position and links specific action plans to this. For example, Singapore wants to become a global FinTech hub using a FinTech strategy. This includes the implementation of policies and programs such as the Regulatory Technology Grant program and the Digital Acceleration Grant program to encourage the application of technology in the financial sector. In addition, the government aims to become a world leader in Green FinTech, as part of the Singapore Green Plan 2030[81].

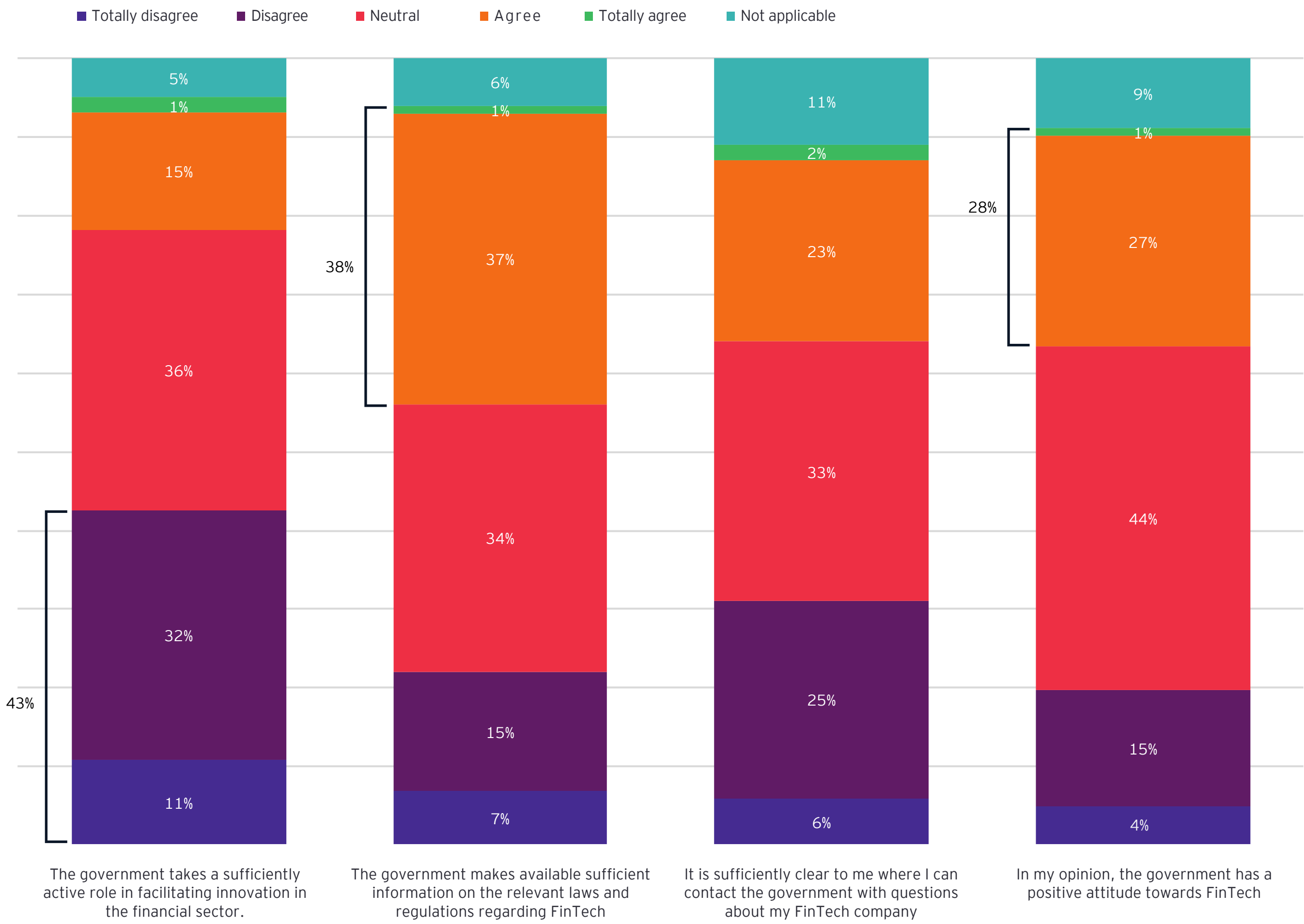


Figure 23. Role and attitude of the Dutch government (n = 126)

[81] FinTech Singapore, Behind Singapore's Ambitions to be Asia's Leading Centre for Green FinTech, 2021

6.3 Role and attitude of regulators

Because 42% of FinTech parties are not subject to a license requirement, not all respondents have experienced the licensing process with the regulator(s). Of the group that has been in contact with the regulatory authority for a license, the most interaction has been with DNB and the AFM, 62% and 24% respectively. There has been less contact with the ACM (8%) and the AP (6%). Due to these different sizes, the quantitative data from the survey for the AFM, AP and ACM were not taken into account in the analysis.

FinTech companies with a license or registration with DNB or the AFM are also subject to the corresponding regulatory regime. The interviews show that FinTechs have mixed experiences with these regulators. This is partly due to FinTechs' different experiences with individual roles within a regulator. The way in which they fulfil their role and mandate largely determines how the FinTech parties have experienced the contact. At the same time, the open and accessible attitude of the supervisors is seen as positive, as well as the information they provide. As shown in figure 24, the DNB process is perceived as constructive (38%), but the AFM's cooperative attitude was also positively mentioned several times during the interviews.

On the other hand, FinTechs note that the role of the supervisor is driven by a high degree of risk aversion, in which it is perceived that there is little room for innovation. The picture is that the Netherlands implements open standards with a relatively strict policy. As a result, the attitude of the supervisor is perceived as rigid. In addition, the attitude of supervisors is mainly aimed at limiting risk in the financial sector, although regulators' vision may also leave room for further stimulation and facilitation of innovation initiatives.

Obtaining a permit in the Netherlands is proof of quality due to this meticulousness and interpretation. However, FinTechs would benefit from a more solution-oriented attitude on the part of supervisors during the licensing process. In order to save time and effort, FinTechs would like to see regulators indicate concretely where the obstacles lie in obtaining a permit. 53% of the respondents who have completed a permit process at DNB rate this as inefficient. Respondents describe it as a time-consuming and unpredictable process. DNB's processing capacity for licence applications is limited[82]. The result is pressure on response and treatment times, which has a negative impact on the FinTech experience.

> The Dutch system is known to be very strict, it is expensive and very time-consuming to get a license (both the preparation and the wait for approval). Startups must move quickly, the slowness costs many companies heads or drives them to abroad.

[82] European Banking Authority, Peer Review Report on authorisation under PSD2, 2023

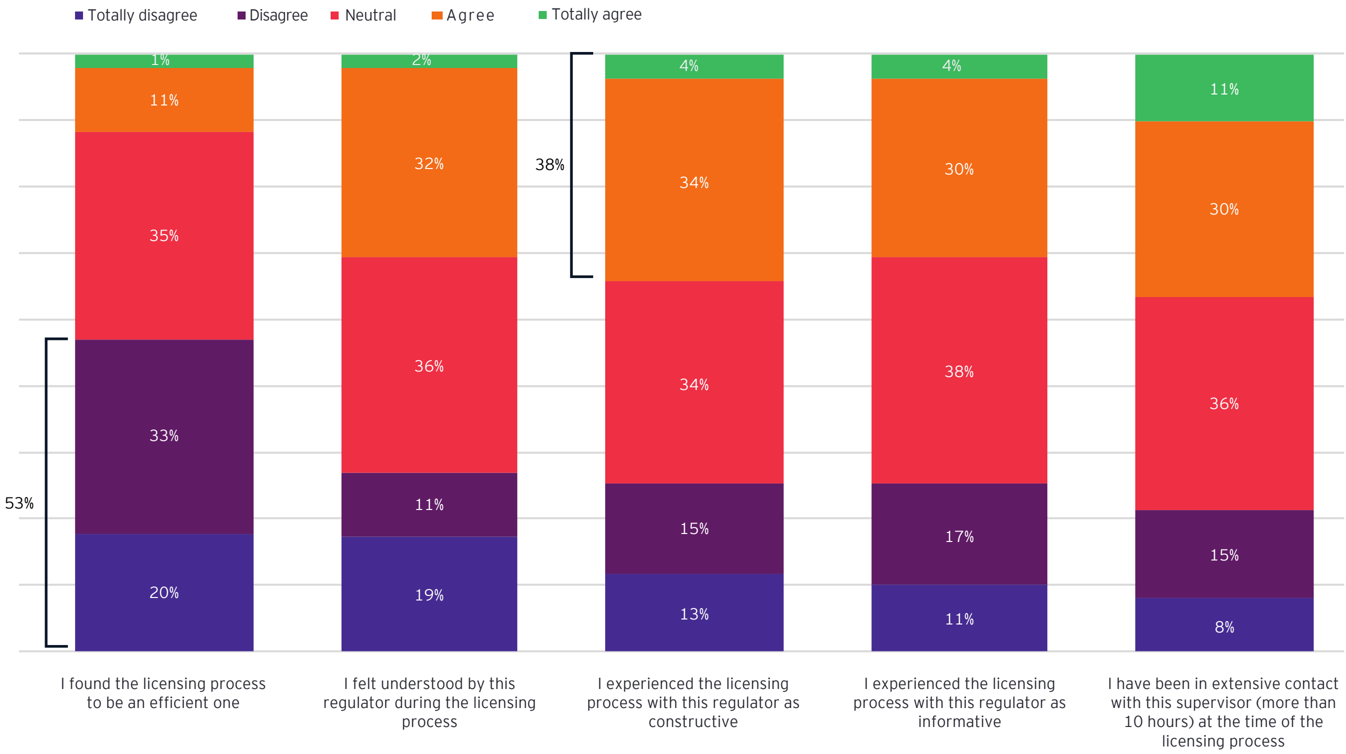


Figure 24. Experiences in the licence application process with DNB (n=47)

International example

The UK is introducing the Centre for Finance, Innovation and Technology (CFIT) with the mission of accelerating opportunities and removing barriers to growth for FinTech

Following a recommendation from the Kalifa Review of UK Fintech, the UK government announced the establishment of CFIT. Supported by the government but led by the FinTech sector, CFIT aims to accelerate opportunities and remove barriers to growth for FinTech by bringing together experts from the ecosystem to drive better outcomes for consumers and SMEs. In addition, CFIT gives policymakers and regulators clear market access, strengthens communication with industry, and helps policymakers identify policy priorities that can best serve the sector[83].

83 UK government, Kalifa Review of UK FinTech, 2021

7 The financial development of FinTechs and the investment climate

Many of the FinTech parties are startups or growing companies. Capital is crucial for these companies to start up and grow. In addition to the own capital of the founder(s), external capital can be raised. 53% of FinTechs have already raised funding. Due to the large amount of liquidity in the market, FinTech parties had sufficient capital at their disposal to grow further until recently. Since the rise in interest rates and geopolitical conditions, there has been more realism in the market as investors have become more critical. As a result, there is more focus on healthy business operations that lead to sustainable and profitable growth.

This chapter first looks at the revenue and profit results that FinTechs achieve, and the expectations for the coming year. In addition, the financing climate for FinTechs is discussed by looking at the Dutch investment climate and access to capital from the main FinTech financing sources.

Promoting factors:

- **Financing options:** There are sufficient possibilities for obtaining capital
- **Foreign capital:** The Dutch FinTech sector has a good reputation and therefore attracts foreign investors
- **Networking opportunities:** Initiatives from the government such as TechLeap and from the sector such as Holland FinTech offer good networking opportunities, so that supply and demand can find each other
- **Reputation:** The diligent attitude of FinTech entrepreneurs and the focus on stable and responsible business operations (including experienced team and positive results) ensures a good reputation and promotes access to capital

Limiting factors:

- **Capital costs:** The European Central Bank's interest rate policy to limit inflation has made it more expensive to borrow money, making raising capital less attractive
- **Risk appetite investors:** Future growth is under pressure due to low risk appetite of investors and a shortage of venture capital investors compared to comparable countries
- **Scale-up financing:** Some parties find that they are not (yet) in the right phase / size to raise capital because they are too large for informal investors but too small for investment funds

7.1 Revenue and profit developments

The turnover and profit figures of a company provide insight into its performance. For raising capital, this insight is important because it gives potential investors valuable information about the health of the company. In the fourth quarter of 2022, more than 60% of FinTechs expect 2022 revenue to end higher than in 2021. Most companies (44%) expect growth between 21% - 80%. Some expect growth of more than 100%, at least doubling sales. On the other hand, 8% expect turnover to decline (figure 25).

The profit figure shows a somewhat more moderate picture. 41% expect earnings growth in 2022 compared to 2021. The largest group expects growth of up to 20% (21%). 12% expect to make a lower profit than in 2021. One in five respondents do not (yet) expect to be profitable in 2022.

In 2019, almost all participants expected revenue and profit growth of more than half. This FinTech Census edition shows a less positive view of the future. A tight labor market and macroeconomic and geopolitical challenges such as rising interest rates and the war in Ukraine make it more challenging for FinTechs to (significantly) increase their turnover and profits. This picture is in line with another survey, which shows lower turnover growth in the SME sector since December 2021[84].

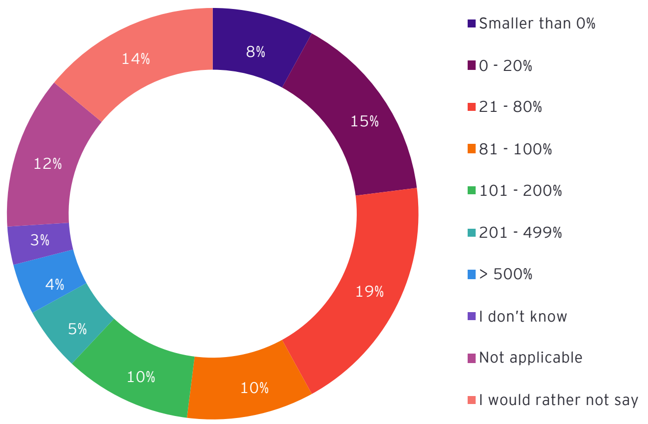


Figure 25. Revenue forecast 2022 compared to 2021 (n = 126)

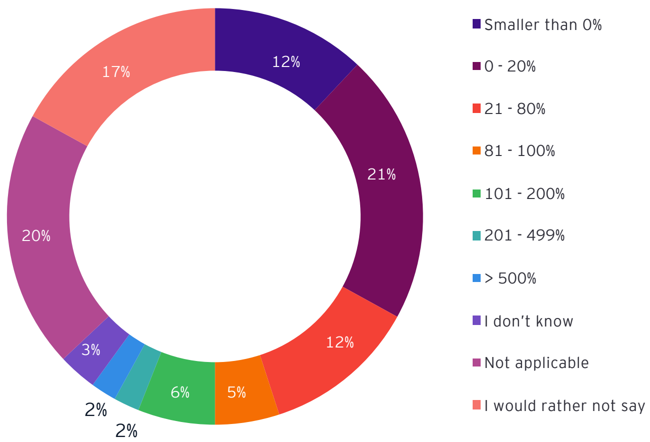


Figure 26. Profit forecast 2022 compared to 2021 (n = 126)

[84] Exact, Mkb Monitor historische omzet data, 2022

Despite declining expectations about the investment climate at FinTechs, they indicate that they will continue to invest in their company to prevent technological restrictions from inhibiting growth. FinTech companies indicate that they will mainly invest more in APIs, Artificial Intelligence and Machine Learning and Cloud systems in the next 12 months (see figure 27).

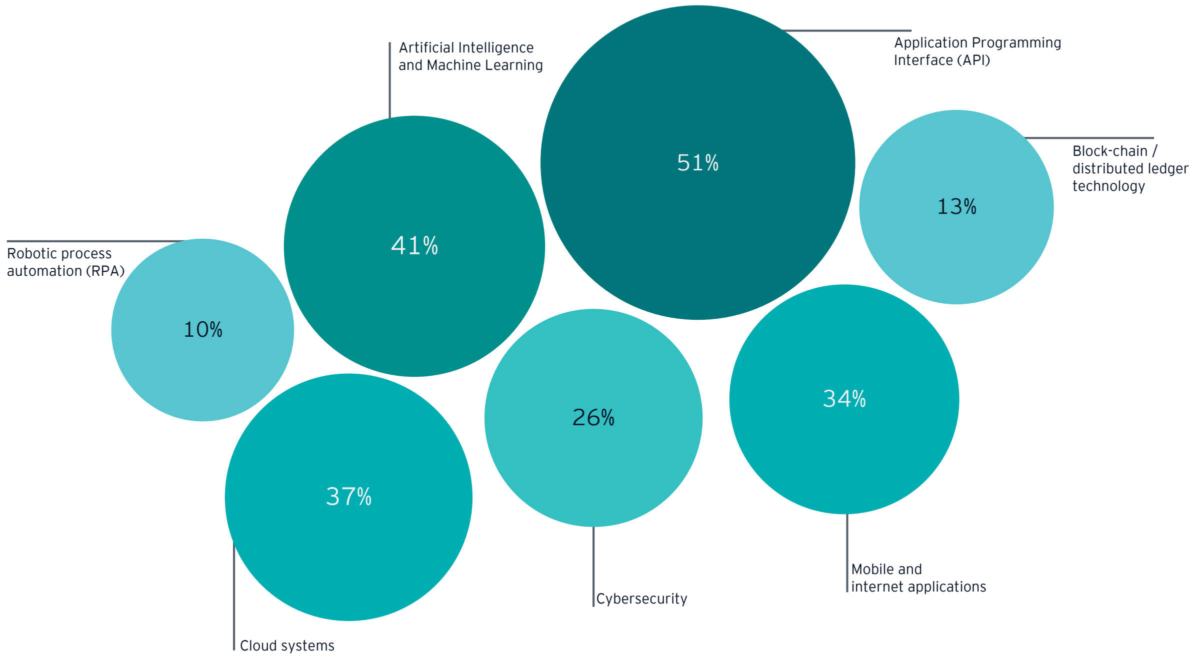


Figure 27. Top seven investment needs next 12 months (multiple answers possible) (n = 126)

7.2 The Dutch investment climate

The investment climate is determined by the degree of economic, financial and socio-political conditions favorable to investment in a country or region. A well-developed investment climate is important because it guarantees sufficient financial opportunities for FinTechs to continue to grow and innovate, for example through team expansion or further product development. FinTech is a popular area to invest in[85] due to the dynamics of the sector, the wide range of innovations that technology can offer within the financial sector and potential scalability of FinTechs. Financial technology developments have simplified, made the industry more accessible and improved customer experiences, giving the industry a proven track record for investors[86]. Globally, after peaking in 2021, a total of $75.2 billion in FinTech funding was raised in 5,048 deals in 2022[87]. The amount invested was about 46% lower than in 2021. However, 2022 still shows an increase compared to 2020, when the total amount of this funding was $49.3 billion.

This trend is also visible in the Netherlands. In 2021, approximately $6.4 billion was raised in nearly 350 deals, down to $2.9 billion in 430 deals in 2022[88]. By comparison, $1.7 billion was raised in 242 deals in 2020. These figures include both FinTech parties that have raised funding for the first time and FinTechs that have already received several funding rounds. The Netherlands-based FinTech parties that have raised the most funding so far are Mollie ($940 million), Mambu ($446 million), and Bunq ($231 million)[89]. Research from 2021 shows that the Dutch investment climate is very favorable, with a top three ranking compared to competitors[90].

However, FinTech parties are seeing a shift in investors' mindset due to rising interest rates[91] and a deteriorating economic outlook. A year ago it was sufficient to show a good business plan with positive turnover figures, now the focus is on healthy business operations that reflect sustainable and profitable growth. However, in interviews, FinTechs acknowledged that the current climate reflects financing opportunities more realistically as investors assess the company and its associated market proposition in more detail. For FinTech companies it is important to demonstrate stable and responsible business operations. For example, many FinTech companies say that well-structured companies, such as talented teams, well-defined product portfolios and large markets, are factors that drive capital raising.

In the FinTech Census of 2023, 36% of FinTech companies indicate that they are satisfied with the general investment climate in the Netherlands, while 28% are dissatisfied (figure 33). The high degree of risk aversion among (European) investors is perceived as detrimental to the investment climate. In addition, the current tax climate has an impact on the Dutch investment climate. By introducing a strict variant of European tax directives, legislative changes and catching up with other countries on the tax system, it has become relatively less attractive to invest in the Netherlands[92].

> “The current financing climate is becoming more realistic, with investors focusing on 'profitable growth' instead of revenue growth.

[85] Dealroom.co, FinTech Q2 2022 report, 2022
[86] EY, How investors and financial institutions can connect with FinTechs, 2022
[87] CB Insights, State of FinTech, 2022
[88] CB Insights, State of FinTech, 2022
[89] Statista, Leading FinTech startups in the Netherlands as of March 2022, by total funds raised, 2022
[90] Dialogic in opdracht van de overheid, Het Nederlandse investeringsklimaat, 2021
[91] De Nederlandsche Bank, Rente dashboard, 2023
[92] EY, 7 vragen over het Nederlandse fiscale vestigingsklimaat, 2022

7.3 Financing options

As figure 28[93] shows, the different growth phases of a FinTech can be traced back to the S-curve[94], a measure of a company's innovation adoption rate and associated growth path. The product, the team size but also the financing needs to develop with a FinTech when it grows from an emerging startup to a scale-up or mature company. During the startup phase, the focus is on investments from family and friends; the need for capital then shifts to venture capital and private equity, and eventually an IPO or acquisition.

As indicated earlier, 53% of FinTechs have already raised capital during a funding round (figure 29). 47% have no external financing needs (yet). This focus on FinTechs growing on their own is also reflected in the broader Dutch business community, which has a relatively good debt-to-equity ratio[95].

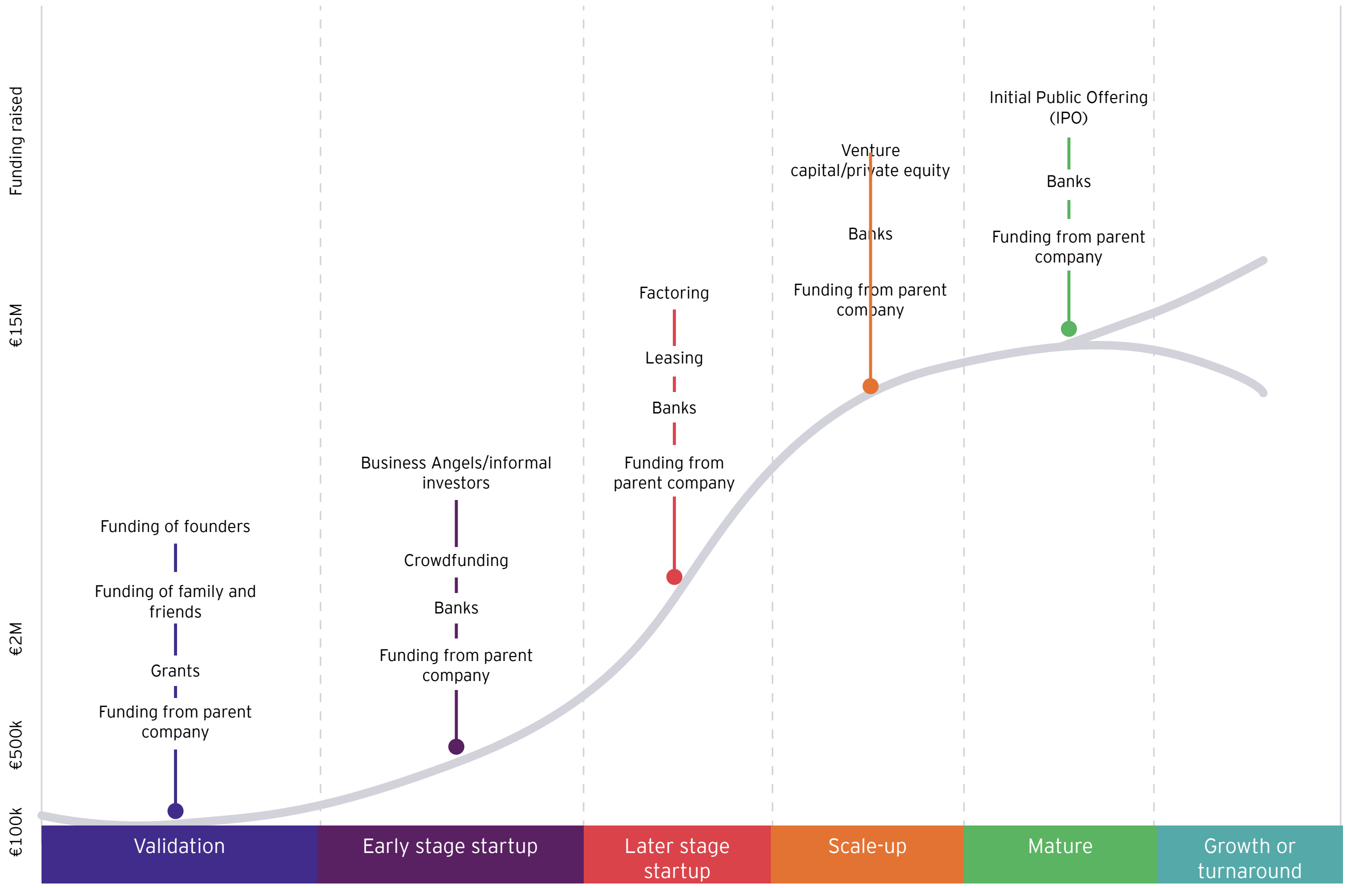


Figure 28. Possible sources of funding during the growth path of startups and scale-ups[96]

[93] EY, A FinTech journey: What to consider when growing from start-up to scale-up, 2021
[94] Everett M. Rogers, Diffusion of innovations, 1983
[95] Rijksfinanciën, Miljoenennota, 2021
[96] EY, A FinTech journey: What to consider when growing from start-up to scale-up, 2021

Figure 29. Capital already raised (n =126)

The Dutch FinTech landscape is one of scale-ups. Most FinTech companies have raised a total amount of between €2 and €5 million (figure 30), 40% have between 11 and 50 employees and are in many cases financed by venture capital/private equity providers (30%). The sources of funding that recur in earlier phases are then the most frequently mentioned, namely investment from founders (25%) and business angels/informal investors (20%), see figure 31.

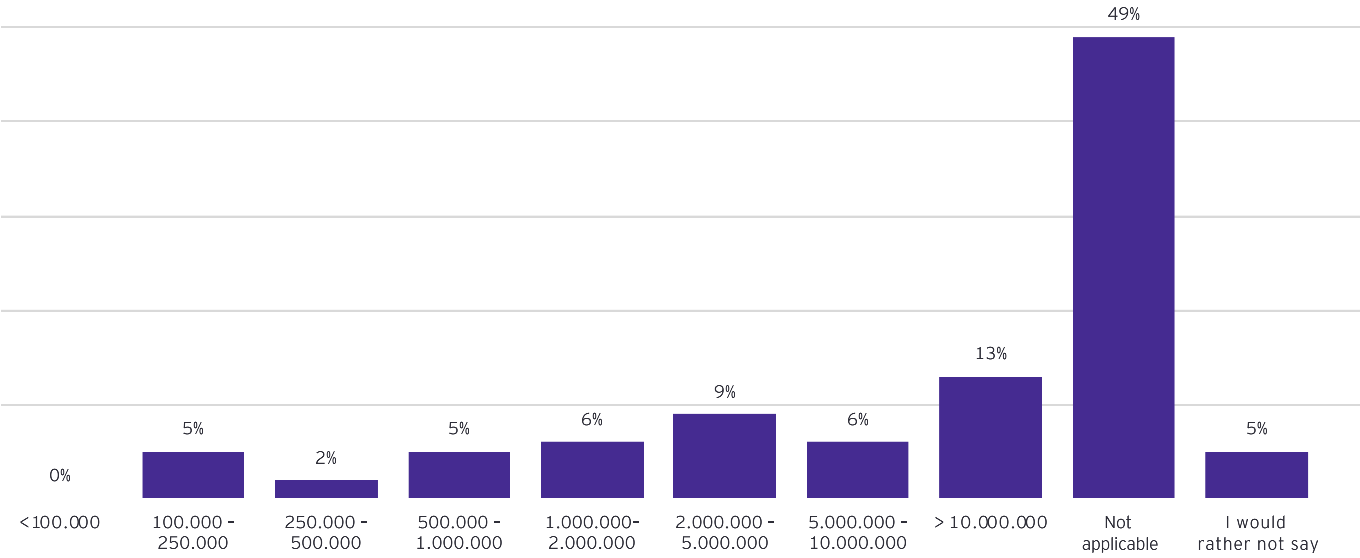


Figure 30. Amount of investments received so far (n = 126)

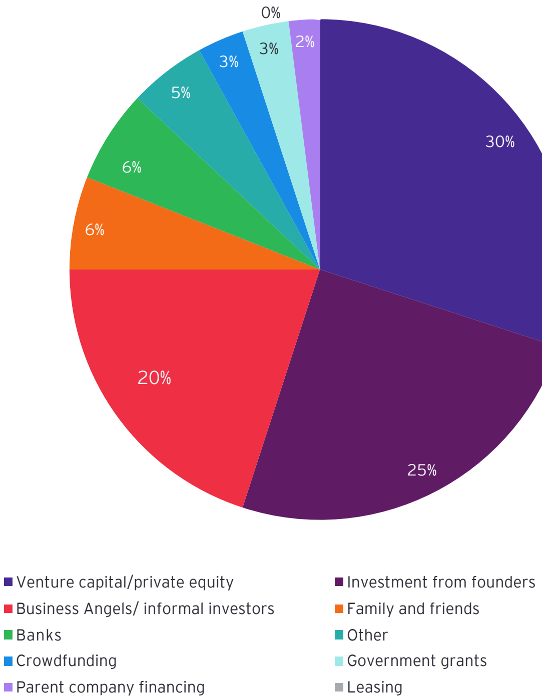


Figure 31. Sources of funding (multiple answers possible) (n = 64)

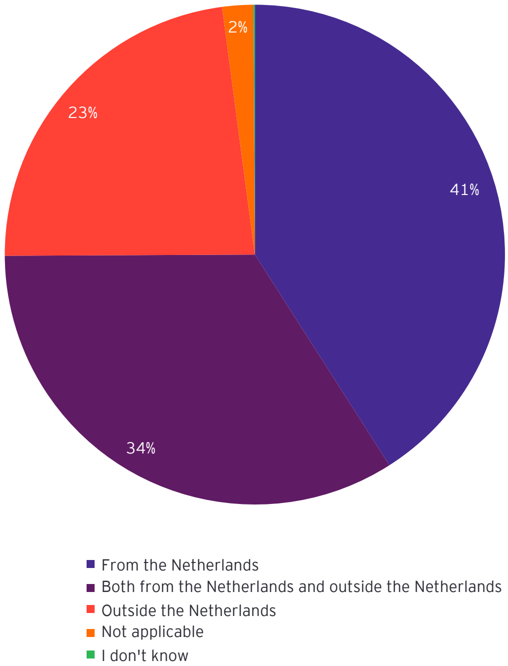


Figure 32. Origin of investments (n = 64)

The external capital that is raised comes from both the Netherlands and abroad. More than half of the FinTech companies that have raised capital have one or more foreign investors. 23% of enterprises are financed entirely by foreign capital (see figure 32). The Netherlands is one of the world's largest recipients of foreign direct investment due to its competitive economy, traditionally favorable corporate tax environment and multiple investor protection treaties[97].

FinTechs that have raised capital find that there is an ample amount of capital available to grow further. For example, 55% indicate that they are satisfied with the availability of and access to private capital (figure 33). The main contributing factors are the established financial sector with a proven track record of attracting foreign investors by large FinTech parties such as Adyen, Knab and Backbase, and a good network to bring FinTech parties and investors together. Government initiatives with Techleap and other network organizations such as Holland FinTech contribute to this.

[97] US Department of State, 2022 Investment Climate Statements: The Netherlands, 2022

A challenge that FinTechs experience when raising capital is, among other things, obtaining bank financing. For example, figure 33 shows that 46% are dissatisfied with the availability of and access to bank financing. Due to higher risk perception, lower risk tolerance and higher funding costs, European banks have further tightened their loan acceptance criteria in 2022[98]. In addition, FinTechs would like to see more venture capital investors in the financing landscape. The Netherlands compares negatively with peer countries when looking at the volume of annual venture capital financing per capita[99].

The increased difficulty to obtain credit from a bank and the aforementioned risk aversion among investors means that FinTech parties would like to have an alternative that dares to take more risk in order to achieve (rapid) growth. Finally, there is a small group of FinTech parties who experience that they are not (yet) in the right phase / size to raise (more) capital. They are seen as too big for informal investors but too small for investment funds. Outside the FinTech sector, there is also a need for a greater supply of capital for parties that have left the startup phase behind[100,101].

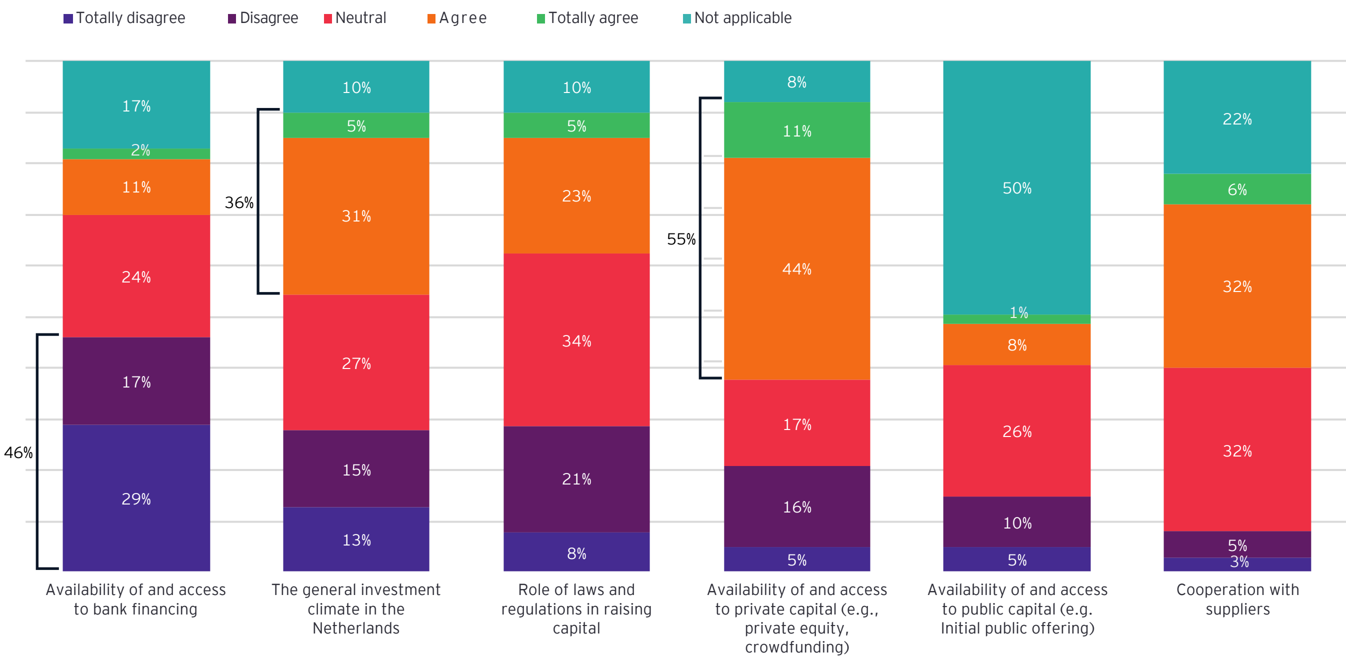


Figure 33. Experience in obtaining capital (n = 64)

98 European Central Bank, Euro area bank lending survey, 2022
99 McKinsey & Company, Building a world-class Dutch start-up ecosystem, 2022
100 Stichting Capital Amsterdam, Vier kansen om te investeren in de kapitaalmarkt voor het middenbedrijf, 2016
101 EY, Eye on Finance - Het Nederlandse vestigingsklimaat, 2022

> It is a challenge to raise lesser amounts of capital. We are too small for the tablecloth, and too big for the napkin

International example

Italy introduces the Cassa Depositi e Prestiti (CDP) Venture Capital initiative to improve access to venture capital to support startups with growth

The Ministry of Economy has allocated an additional €2.5 billion in 2022 to the CDP Venture Capital subsidiary (Fondo Nazionale Innovazione), a VC subsidiary of the CDP Group, to attract both domestic and foreign investors and increase the availability of venture capital in Italy[102].

International example

Australia drives continued growth and innovation within the FinTech sector through Research & Development (R&D) Tax Incentive

In the 2022 EY FinTech Australia Census, 51% of Australian FinTechs have successfully applied for the R&D Tax Incentive (RDTI) in the last two years or are in the process of applying. In addition, 79% of FinTechs report that the initiative drives the company's growth and innovation. Of the FinTechs surveyed who have successfully applied in the past two years, 92% say that the tax incentive for R&D increases their chances of keeping certain aspects of their business in the country[103].

[102] FinTech District en EY, FinTech Waves Italië, 2023
[103] EY, Australian FinTech industry well-positioned for a challenging 2023, shows significant maturity in 2022, 2022

Compared to 2019, there are two datapoints that stand out. The percentage of FinTech parties that have already raised capital has remained almost the same (56% in 2019 compared to 53% in 2023). In 2023, there is therefore also a large group of FinTech parties that operate independently, without external capital, in order to maintain control and financial flexibility. In addition, venture capital/private equity has made a big leap as a source of financing. In 2019, 4% used this as a source of financing compared to 30% in 2023. This shows that these investors have entered the Dutch FinTech market, and that there is sufficient demand for them from the FinTech parties. On the other hand, less use was made of sources of financing such as subsidies and financing from the parent company in 2023. Despite the fact that there are currently no major challenges experienced around raising capital, FinTechs are looking to the future with an uncertain eye. As described in more detail in Chapter 2, FinTech companies view economic and geopolitical developments, in addition to attracting talent, as their biggest contemporary challenges. Recent market developments are creating uncertainty on the international capital market. It is therefore questionable whether FinTechs can continue to meet their capital needs in a proportionate way in the near future.

8 How does the Netherlands compare to other countries?

In the previous chapters it appears that the Netherlands is seen as an attractive market for FinTechs. The FinTech sector is recognized in several countries in Europe as a sector with a lot of growth potential. That is why not only the Netherlands, but also other countries within and outside Europe are taking facilitating measures to attract and further develop FinTechs. To assess how the Netherlands compares to other countries with similar FinTech activities, a comparison is made with the following countries[104]:

- France
- Lithuania
- Germany
- Sweden
- United Kingdom
- Italy
- Singapore
- Australia

Italy, Singapore and Australia have been added to the country comparison since the 2019 census due to striking FinTech developments (which are explained in the country comparison), a mature FinTech environment and active government policy towards FinTechs.

[104] Sources can be found in the appendix

France

Emerging FinTech hub with determined and clear growth ambitions

Number of FinTechs: approx. 1,000
Growth in FinTech: approx. 29% since 2019
Investment in FinTech: approx. € 4.5 billion
Number of jobs in FinTech: approx. 25,000

Distinctive factors:

- Additional incentive to hire international workers thanks to the technology visa (a simplified and accelerated procedure for non-European startup workers, owners and investors to obtain a residence permit in France)
- The French government publicly expresses its ambitions and vision for the FinTech sector, such as President Macron's goal of having 100 French technology unicorns by 2030
- Paris rose 15 places to tenth position in the 2022 Global Financial Centers Index, which examines the competitiveness of financial centers, and is second in Europe after London. Amsterdam is in 19th place.

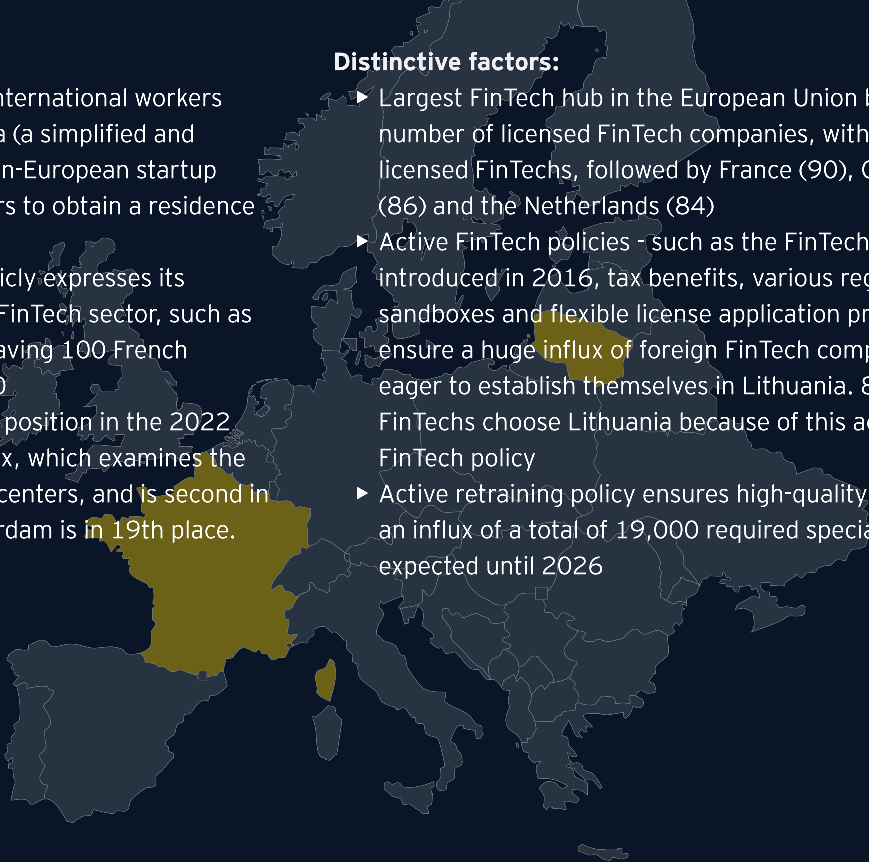
Lithuania

A relatively large and growing FinTech sector, mainly in terms of licensed FinTechs.

Number of FinTechs: approx. 265
Growth in FinTech: approx. 26% since 2019
Investment in FinTech: approx. € 65 million
Number of jobs in FinTech: approx. 5,900

Distinctive factors:

- Largest FinTech hub in the European Union based on number of licensed FinTech companies, with 147 licensed FinTechs, followed by France (90), Germany (86) and the Netherlands (84)
- Active FinTech policies - such as the FinTech Strategy introduced in 2016, tax benefits, various regulatory sandboxes and flexible license application procedures - ensure a huge influx of foreign FinTech companies eager to establish themselves in Lithuania. 81% of FinTechs choose Lithuania because of this active FinTech policy
- Active retraining policy ensures high-quality staff, with an influx of a total of 19,000 required specialists expected until 2026



Germany

The German FinTech market is becoming increasingly mature, characterized by an increasing average size of transactions, increasing investor interest and the establishment of leading FinTech parties in large subsectors.

Number of FinTechs: approx. 1,000
Growth in FinTech: approx. 25% since 2019
Investment in FinTech: approx. € 1.3 billion
Number of jobs in FinTech: approx. 18,400

Distinctive factors:

- In Germany, a trend of collaborations between B2B FinTechs and other sectors, which benefit from FinTechs' technology and infrastructure services, is visible. In addition, various parties help startups scale their business and set up various regional digital hubs
- The digital payments sector is the second largest market for digital payments in Europe after the United Kingdom. InsurTech also continues to grow rapidly thanks to increased investment activity. In addition, there is an increase in B2C FinTech solutions, especially in the field of embedded finance/open banking and data, and ESG/Sustainable Finance solutions
- There are a number of incentive programs for FinTechs, mostly set up by the German bank KfW bank, such as "ERP" programs, "KfW Capital" as an investment fund, and the "Zukunftsfonds"
- The federal system stimulates the formation of multiple FinTech clusters within Germany: Berlin, Munich, Hamburg and Frankfurt. Each cluster has its own ecosystem characteristics and players
- A large talent pool available as the country is home to a variety of global players in the wider financial sector (such as banking, insurance and asset management)

Sweden

Sweden strives for a successful FinTech sector, supported by an ecosystem of startups, a society with high technological skills and high adoption of modern technologies.

Number of FinTechs: approx. 509
Growth in FinTech: approx. 32% since 2019
Investment in FinTech: approx. € 3 billion
Number of jobs in FinTech: approx. 12,500

Distinctive factors:

- Sweden has a highly tech-savvy population (second in World talent ranking 2021) with a well-developed digital infrastructure (fourth in the Digital Economy and Society Index, one position after the Netherlands). For example, Stockholm has a strong supply of highly educated people coming out of good educational institutions e.g. Stockholm School of Economics, Royal Institute of Technology, and several other universities in the region
- The progressive climate agenda, demand for sustainability, and high volume of ESG investments puts Sweden at the forefront of "Green FinTech" (sustainable FinTech solutions that focus on addressing the 17 United Nation's Sustainable Development Goals)
- Nasdaq Nordic First North Growth Market provides more flexible rules and procedures for SMEs seeking a listing
- Sweden is currently in the second phase of a pilot for the implementation of a digital Swedish krona. In this phase, testing is being done around how the systems of potential e-krona distributors would integrate into the e-krona network

United Kingdom

Global FinTech leader with responsible and active policy makers to support FinTechs and maintain the UK's position as a FinTech hub.

Number of FinTechs: approx. 2,500 FinTechs
Growth in FinTech: approx. 32% since 2019
Investment in FinTech: approx. $ 4.1 billion
Number of jobs in FinTech: approx. 54,500

Distinctive factors:

- The UK government sets concrete and measurable targets for its global market share in the FinTech sector, namely to maintain at least its global market share of 10% and grow to 12% by 2030
- The UK is a global leader in FinTech policy, in part because of its "regulatory sandbox", which grants startup FinTechs a temporary, limited license to operate and test their solutions. In addition, following a recommendation from the Kalifa Review, the "regulatory scalebox" has been implemented, which supports FinTechs to scale securely within the regulatory framework
- Introduction of the Centre for Finance, Innovation & Technology (CFIT), funded by the government as a result of the 'Kalifa Review of UK FinTech', to accelerate opportunities and remove growth barriers
- In February 2023, the government announced the launch of a new ministry, "Department for Science, Innovation and Technology" that will commit to stimulating innovation and growth in jobs and the economy
- Government support through networking and events, including representation at the Innovate Finance Global Summit at UK FinTech Week, FinTech Week London, FinTech Awards London and the FinTech Founders Group
- London is considered a FinTech superhub, surpassing San Francisco and New York by 2022 to become the epicenter for global FinTech investments

Italy

The Italian FinTech sector shows a relatively large growth compared to 2019, with FinTechs developing in maturity level due to, among other things, active government policy.

Number of FinTechs: approx. 630
Growth in FinTech: approx. 12% since 2021
Investment in FinTech: approx. € 1.04 billion
Number of jobs in FinTech: approx. 20,000

Distinctive factors:

- The Italian government is committed to stimulating innovation within startups and SMEs, including through the National Recovery and Resilience Plan (PNRR), where 27% of the budget is allocated to stimulating innovation and digitization
- The Ministry of Economic Affairs has allocated an additional € 2.5 billion to the CDP Venture Capital subsidiary (Fondo Nazionale Innovazione) in 2022, to attract both domestic and foreign investors and thus increase the availability of venture capital in Italy
- Private investment in startups and SMEs will benefit from a 50% tax deduction reduction, increased from 30% in 2020
- Italian FinTechs raise more capital on average in 2023 compared to 2020, an indicator of increasing maturity in the sector

Singapore

FinTech and innovation are high on the Singapore government's agenda, as part of its ambition to become a 'smart nation'.

Number of FinTechs: approx. 1,580
Growth in FinTech: approx. 33% since 2019
Investment in FinTech: approx. $ 3.9 billion
Number of jobs in FinTech: approx. 14,000

Distinctive factors:

- More than 40% of FinTechs in Southeast Asia are based in Singapore, which is the highest ranked FinTech city in Asia (in Findexable's Global FinTech Index)
- The government has expressed its ambition to become a global FinTech hub and has a FinTech development strategy, including implementing policies and programs such as the Regulatory Technology Grant program and Digital Acceleration Grant program to drive technology adoption in the financial sector
- The Singaporean government offers free or subsidized reskilling or upskilling opportunities to citizens to increase the availability of talent, such as a program for over-40s that is subsidized by up to 90%
- The government also supports FinTech initiatives such as The API Exchange (APIX), Singapore Financial Data Exchange (SGFinDex), Singapore FinTech Association, FinTech Office and the FinTech Festival
- The largest subsector is crypto/blockchain (20%), which the Singaporean government and the Monetary Authority of Singapore (MAS) strategically respond to and support. For example, the MAS recently announced that it wants to run pilots with the FinTech sector in the field of digital assets (the Guardian (2022) and Dunbar (2021) projects)

Australia

The FinTech sector continues to grow in maturity, with more paying customers and an increasing number of companies generating profits.

Number of FinTechs: approx. 800
Growth in FinTech: approx. 27% since 2019
Investment in FinTech: approx. AUD$3.6 billion
Number of jobs in FinTech: approx. 16,800

Distinctive factors:

- The number of paying customers of Australian FinTechs continues to increase year on year, demonstrating increasing maturity in the sector: 45% report more than 500 paying customers
- Australia is a convenient location for FinTechs to establish themselves, with easy access to the Asian financial sector
- The regulatory sandbox introduced in 2020 reflects the government's positive attitude towards innovation and FinTech development
- According to the 2022 EY FinTech Australia Census, 51% of Australian FinTechs have successfully applied for the R&D Tax Incentive (RDTI) or are in the process of applying in the last two years. The RDTI means that:
  - A company with sales under $20 million receives a constant tax benefit of 18.5% on eligible R&D expenses. Depending on any tax losses or offsets, this can result in a total benefit of between 18.5% and 43.5%. For companies that have no tax losses or offsets, the total benefit will equal the constant tax benefit (i.e. 18.5% of R&D expenses)
  - A company with revenue above $20 million and R&D expenses less than 2% of total annual operating expenses receives a constant tax benefit of 8.5%. If the R&D expenses are more than 2% of the total operating costs, the company receives a constant tax benefit of 16.5%

The Netherlands

A growing FinTech country, attractive because of the (digital) infrastructure, digital adoption among consumers and companies, and the culture.

Number of FinTechs: approx. 861
Growth in FinTech: approx. 10% since 2019
Investment in FinTech: approx. $ 2.9 billion
Number of jobs in FinTech: approx. 20,000

Distinctive factors:

- The Netherlands ranks third in the Digital Economy and Society Index (DESI), which reflects its strong digital infrastructure, laying the foundation for FinTechs to be able to offer their products
- The international culture, the pleasant living and working climate and arrangements for international employees make the Netherlands very attractive for international talent
- The digital Dutch society and the open attitude towards innovation and renewal help in the development of digital solutions from FinTechs and lead to the increasing adoption of FinTech products and services by both consumers and companies
- The Dutch interpretation of European legal directives and the Dutch supervision thereof leads to a reliable reputation
- The government further supports FinTech initiatives such as Amsterdam FinTech Week and Money2020

The Netherlands is one of the most attractive locations for FinTechs
Based on the various indicators shown in figure 33, the Netherlands is in a relatively good position compared to the countries included in this country comparison. The Netherlands stands out particularly positively in areas such as demand (EU Innovation Scoreboard, DESI) and talent (World Talent Ranking). The Netherlands occupies an average position on policy indicators such as the tax environment and access to capital. These scores make the Netherlands a relatively attractive FinTech location, compared to the other countries.

Demand

Digital competitiveness ranking 2022
Measures the availability and readiness of countries to explore new digital technologies

Talent

World talent ranking 2021
Reflects the extent to which economies can attract and retain talent

Policy

Tax competitiveness ranking 2022
Examines tax competitiveness

Capital

Access to Capital Ranking 2023
Examines the extent to which countries provide access to capital

Policy responses to enabling technologies
Shows the extent to which policymakers are responding to new technologies driven from FinTech

Figure 34. Dutch position vis-à-vis countries in country comparison[105]

[105] IMD, Tax Foundation, Financial Stability Institute, U.S. News, EY analysis 2023

9 Recommendations for stimulating and facilitating the FinTech sector

The FinTech sector has grown in recent years and is making an increasing contribution to Dutch society. In addition to the direct contribution to the economy and employment, estimated at approximately € 2.1 billion gross value added[106], the sector also contributes to the development of a strong and healthy financial sector in the Netherlands. It is important that the core financial infrastructure is not dependent on foreign parties and remains autonomous. This is happening through further digitalization and innovation, making the financial sector more diversified and competitive. Ultimately, this leads to more freedom of choice for users and a healthy market economy. Dutch history is full of examples of financial innovation, such as paying with iDEAL. Building on this history, further action is needed to (continue to) support and develop FinTech innovation in the Netherlands.

Based on this research, three areas have been identified where further steps should be taken to maintain and improve the Netherlands' FinTech position:

1. **Ambition and strategy -** the government's ambition and strategy to stimulate growth and development
2. **Guiding function -** creating a directing function in the sector to stimulate collaboration and tackle impeding factors
3. **Policies and regulations -** an approach that protects consumers/users while enabling FinTech development and stimulating competition

[106] TechLeap, Netherlands Startup Employment, 2022; Storm2, FinTech market report Netherlands, 2022; EY analysis 2023

1. Ambition and strategy

Ambition is essential to achieve your goals. Ambition ensures the willingness to take action or find the means necessary to achieve an end. Without ambition, things remain basically unchanged. The Dutch FinTech sector would benefit from a clear FinTech ambition and strategy from the government to further facilitate and stimulate the sector in a targeted manner. The Dutch FinTech sector is seen as attractive, the FinTech ambition and the resulting strategy and objectives will ensure that the Netherlands will maintain this position well into the future. The country comparison in Chapter 8 shows that a clearly stated (Fin) Tech government ambition and strategy indicates that the sector will see further growth and development in terms of jobs, trade and inclusion within the ecosystem. This leads to the following recommendations:

Recommendation 1: Define and communicate the Dutch FinTech ambition and strategy

Demand	Talent	Policy	Capital

A FinTech ambition, strategy and objectives confirm (inter) nationally that the FinTech sector is a significant added value for the Netherlands. This strengthens Dutch FinTech parties in their ambition for product or proposition development and attracts foreign investors and international FinTechs.

Recommendation 2: Set out concrete and measurable government objectives resulting from the Dutch FinTech ambition and strategy

Demand	Talent	Policy	Capital

With neighboring countries actively focusing on creating an attractive business environment, such as the French recovery plan to make the investment climate more favourable[107], it is important to continue to focus on developing the sector with concrete and measurable government objectives. The Dutch government objectives that were drawn up as a result of FinTech Census 2019 were not (all) concrete and measurable, which means that these objectives are unknown in the sector and fundamental challenges have not (yet) been solved. Countries such as the United Kingdom, France and Singapore have shown that these concrete and measurable objectives guide government and/or regulatory support measures. An example of a concrete target is the statement by French President Macron that he wants to see an increase the number of French unicorns from 27 in 2022 to 100 in 2030. Another example is the UK government's target to grow its global FinTech market share from 10% to 12% by 2030.

Finally, there is an opportunity for the government to actively investigate where FinTech solutions can play a role in government processes and services.

[107] EY, Attractiveness survey Europe, 2022

2. Guiding function

Recommendations on the further development of the FinTech sector and the removal of barriers are not only addressed to the government. Cooperation between the government, regulators, the financial sector and FinTech companies is essential. This FinTech Census covers a wide range of topics (including demand, talent, policy and capital) that are currently the responsibility of various stakeholders (including ministries, regulators and market parties). However, there is no body with a central management function; this would consist of a representative selection of key actors from the FinTech ecosystem (public and private), and ensure the development of FinTech success in the Netherlands by tackling the obstacles that stand in the way of further progress. The focus here should be on providing support on topics such as FinTech adoption by consumers and companies, availability of suitable talent, applicable laws and regulations and access to capital. In addition, emphasis is placed on cooperation and market rapprochement. Based on this, the following recommendations have been drawn up:

Recommendation 3: Set up a central body with a directing function to facilitate and stimulate a stable, safe and innovative FinTech sector

Demand | Talent | Policy | Capital

A central body should provide the organizational link needed to achieve progress in areas where many different stakeholders are involved. See, for example, the CFIT in the United Kingdom. It should be noted that the form of cooperation, mandates and roles must be clear in order to avoid unwanted mixing of public and private functions.

Recommendation 4: Facilitate collaborations with FinTechs

Demand

FinTechs no longer see collaboration as one of their biggest challenges, but as an important opportunity for further growth and development. For FinTechs, access to an existing customer base, knowledge and experience and, in the case of partnerships with established players, a stamp of quality and access to investment budgets are the main drivers for cooperation. For established financial institutions, collaborating with FinTechs contributes to further digitization and optimization of their own service portfolio[108]. Collaboration and interaction within the ecosystem accelerates value creation and growth, especially within a startup community[109]. The sector has an important role to play in this, for example by:

Recommendation 4.1: Set up a forum or central, digital place where (FinTech) parties can find the right contacts

Ecosystem parties are regularly looking for partners to work with, but it is often unclear which parties are suitable and how best to get in touch with them. A clear overview of the different players and their contacts helps to efficiently make mutual connections. For this, existing public or private initiatives such as the TechLeap database or the Holland FinTech member network can be used.

[108] EY, Collaboration at the core: evolving partnerships between banks and FinTechs, 2021
[109] Brad Feld en Ian Hathaway, the Startup Community Way, 2012

Recommendation 4.2: Explore how parties can jointly reduce the administrative burden of cooperation within the legal framework
Startup FinTech companies indicate that they cannot meet the administrative burden associated with a collaboration, especially if they work with established financial institutions. Extensive requirements in the field of 'Know Your Supplier', 'Third Party Risk Management' and possible (European) outsourcing rules put a lot of pressure on SMEs. In addition, there is often a complex legal record of contract conditions. These are all important and necessary requirements, but it is a challenge for SMEs to meet them. Therefore, it is recommended to explore ways in which market parties can standardize and optimize onboarding and collaboration.

Recommendation 5: Increase the role of FinTechs in Dutch trade policy and trade missions

Demand

Access to new markets is seen as the biggest opportunity for FinTechs. Reaching international markets and customers contributes to further economies of scale that are difficult to achieve in the relatively small Dutch market. A large sales market is also important for attracting financing. The 2022 strategy for Foreign Trade and Development Cooperation focuses on sustainability and digitalization[110]. In order to achieve further growth, it is important to specifically include the digitalization of the financial sector.

Recommendation 5.1: Specifically include the Dutch FinTech sector as a point of attention in the Foreign Trade and Development Strategy
The Strategy for Foreign Trade and Development Cooperation 2022 places a lot of emphasis on the internationalization of innovation policy and the digitalization transition. This is partly based on the growth plan proposed by the National Growth Fund (NGF). The NGF focuses on eight themes, six of which are in the field of R&D and Innovation. Agriculture, Energy, Care and Mobility are examples of concrete themes[111]. It is important that Financial Services is added as a theme and receives corresponding attention as an innovation theme.

Recommendation 5.2: Set up FinTech trade missions (called 'FinTech bridges' in other countries), but also evaluate previous trade missions in the FinTech field
Given the importance of financial services and the role that innovation plays in maintaining the security, stability and accessibility of the financial sector, it is important to actively connect with other international markets to exchange knowledge and experiences. In this context, the United Kingdom talks about 'FinTech bridges' with other markets where agreements have been made with other countries such as Australia, Hong Kong, Singapore and South Korea. Purpose is to arrange access to events, meetings, networking opportunities, but also streamlining, for example, permit processes, subsidy applications or introducing potential customers, investors, trade organizations and advisors. For existing or previous trade missions (for example, the Netherlands entered into a partnership with Japan in 2021 to strengthen the 'smart industry' in both countries[112]), it is important to map out what the concrete results have been. This helps to learn from the commitments or agreements that have been made and increases the effectiveness of subsequent collaborations.

[110] Ministerie van Buitenlandse Zaken, Beleidsnotie 2022: Doen waar Nederland goed in is, 2022
[111] Rijksoverheid, Nationaal Groeifonds
[112] Rijksoverheid, Nederland en Japan gaan samenwerking aan voor versterken smart industry, 2021

Recommendation 6: Communicate Dutch FinTech successes to put the Netherlands on the map as a FinTech country

Demand

The Netherlands is an attractive location for FinTechs, has a strong FinTech ecosystem and has already produced several successful companies. Communicating about this (internationally) can further strengthen the Netherlands' reputation as a location for other FinTech parties.

Recommendation 6.1: Create an overview of FinTech successes and win-stories
To illustrate the favorable Dutch FinTech business climate, it would help to compile an overview of success stories with references to successful FinTech parties and / or successful collaborations. In addition to creating an overview, the publication of the overview (internationally) would be crucial for it to have an impact.

Recommendation 6.2: Appoint ambassadors to promote the Dutch FinTech sector
Ambassadors can have a positive influence on the Netherlands' reputation as a FinTech country. There are already several people who manifest themselves as ambassadors of the Dutch FinTech sector, but this could be more focused, clearer and coordinated in order to increase the impact.

Recommendation 7: Focus on the connection between (re)training and the FinTech sector

Talent

Supply and demand for talent and skills can be better matched. Here there is a role for the government (see recommendation 13) but also for the FinTech sector:

Recommendation 7.1: Advise and promote training and skills needs at educational institutions
The FinTech companies themselves have the best view on the required skills that are difficult to find. Bringing these insights together to create a holistic view of FinTech skills across the industry is valuable information for training developers and training providers.

Recommendation 7.2: Offer talent development or retraining programs
In addition to trainers, FinTech companies and other market parties can also play a role in developing appropriate skills through development and/or retraining programs. The current focus on recruiting existing expertise ensures a rotation of available employees and a limited influx of new personnel. This can be improved by offering appropriate retraining opportunities. The government does provide funding for the STAP program for example, but so far, only 11% of the training courses on offer are aimed at moving into the technology sector[113].

[113] STAP-budget.nl, STAP opleidingen, 2022

Recommendation 8: Focus on valorization between universities and the FinTech sector

Talent

Valorization – the use of knowledge for social purposes – is the third core task of universities, in addition to teaching and conducting research. This sometimes happens very visibly, such as in the case of incubators in which there is cooperation between universities and industry, and sometimes less visibly, for example in internships, graduation projects and research commissioned by public organisations[114]. The financial sector is of great social importance and FinTech plays an important role in this. Strengthening the ties between universities (and other educational institutions such as mbo and hbo) would have a positive effect on FinTechs and thus contribute to a stable and innovative financial sector. The central directing body could assist with this by making the FinTech sector more visible to students, thereby increasing its popularity.

Recommendation 9: Seek harmonization in remuneration policies and avoid negative side effects

Talent | Policy

Being able to offer appropriate rewards is a challenge for FinTechs. For example, 56% experience difficulty in retaining talent as a result of remuneration policies. The remuneration policy is also the least attractive scoring factor in determining the attractiveness of the Dutch market (see figure 3, p. 11). This is partly caused by applicable rules regarding rewards such as the bonus ceiling and the tax treatment of stock options. Research by TechLeap shows that a more advantageous equity policy could lead to 18% growth in the number of jobs within startups in 2030[115]. As of 1 January 2023, a legislative amendment has been implemented that accommodates startups and scale-ups by delaying the tax moment when exercising stock options. Despite this improvement, there are still some points that could benefit from further adjustment, such as the level of tax levies and standardization of the valuation of startup and scale-up shares. In addition, it is important to harmonize rules on maximum bonuses[116] in order to avoid negative side effects, such as competition with other sectors or countries.

Recommendation 10: Improve access to capital for FinTech parties in all phases of growth

Capital

As described in Chapter 7, FinTechs face financing challenges in the scale-up phase. Currently, growth opportunities for scale-up FinTechs are inhibited by access to capital. Stimulating investments in this group of FinTechs offers opportunities for Dutch employment, skills development, economic growth and general market attractiveness. To comply with this, one could think of setting up a (possibly nationally funded) growth capital fund that focuses on the FinTech sector ('FinTech Development Fund'). The central directing body could take on a facilitating and coordinating role. For example, it could investigate whether a (nationally funded) fund would be valuable to increase access to capital for scale-up FinTechs.

[114] VSNU, Een Raamwerk Valorisatie-indicatoren, 2013
[115] Techleap, Netherlands Startup Employment, 2022
[116] Utrecht University – European Centre for Alternative Finance, Making employee ownership work in startups and SMEs, 2021

3. Policies and regulations

In addition to a government ambition, strategy and objectives, the sector would benefit from some fundamental adjustments from the government and the regulators to stimulate innovation while continuing to protect consumers. 38% of FinTech parties find that the government has a positive attitude towards FinTech. Appropriate policies and regulations with a clear mandate for regulation can promote innovation in the FinTech sector in a targeted manner. It provides FinTech entrepreneurs with innovative ideas with a clear framework within which to work, sets standards for business operations and gives consumers the confidence to try out new services and providers. It is especially important to create a level playing field for FinTech parties, to offer a test environment and to have access to qualified personnel.

Recommendation 11: Focus on regulatory harmonization and proportionality

Policy

As mentioned earlier, the legal framework has a major impact on the FinTech sector. During the interviews conducted for this Census, FinTechs felt that there is currently an uneven playing field; FinTechs described challenges stemming from diverging interpretations of European standards between Member States (for example with MiFID II and PSD2, as mentioned in chapter 6.1). It is important to map out where the biggest differences of interpretation lie in order to further focus on harmonization. The harmonization of laws and regulations is important for many FinTechs, because the Dutch interpretation of standards is often stricter than that of other countries. This is an obstacle when companies want to expand to another country and as a result have to comply with a (slightly) different regime, entailing additional burdens.

In addition to harmonization, the proportionality of laws and regulations is also important. In many cases, FinTech companies fall under the same regime as large established players, while the risk associated with the business model does not justify that same regime. It is therefore important that the government in all cases explicitly takes the FinTech sector into account when implementing European standards or determining the regulatory approach in order to find a balance between certainty and flexibility.

Recommendation 12: Increase the scope for experimentation

Policy

A safe environment where FinTech parties can test their innovative, value-adding proposition without significant impact from legislation and regulations stimulates further innovation. FinTech parties consider the required investments for product development where a license is required as a major barrier. Temporary approval from the regulator to test pilots in a defined environment lowers the threshold for FinTechs to develop innovative solutions for market opportunities. Regulators have an important task here to balance the tension between innovation and consumer protection. In addition to sufficient availability, a consistent approach and point of view in the interpretation of the role of regulation of innovation and FinTech is crucial. To broaden FinTechs' experimentation space, there are three recommendations:

Recommendation 12.1: Set up a 'nursery' in which FinTechs are temporarily allowed to test a proposition under supervision
Investigate the possibilities within the (European) legal framework to work with temporary licenses, enlightened regimes and proactive support from the regulator in testing new FinTech propositions The ability to test a product or proposition with customers without having to apply for a full and permanent license lowers the threshold for FinTechs to test new ideas in the market.

Recommendation 12.2: Broaden regulatory capacity to proactively approach and guide FinTechs in an experimental environment
Regulators could benefit from additional capacity to actively support and guide FinTech. Capacity is currently limited. As a result, a lot of interaction is reactive from the regulators and there is no room for further support.

Recommendation 12.3: Clarify the role of the regulator and its translation of innovation into the vision of regulation
FinTechs' experiences with regulators differ and depend on the employee they spoke to. Based on this research, there appear to be differences in the interpretation of the regulator's vision on innovation and how employees can fulfil this vision in the performance of their duties. It is in the interest of the sector if more attention is paid within the regulators to the unambiguous interpretation of the vision on regulation and the attitude towards the sector, for example through training and discussion of case studies.

Recommendation 13: Increase the supply of talent

Talent | Policy

With approximately €2.1 billion of gross value added, the Dutch FinTech industry contributes directly to the Dutch economy[117]. For FinTech companies to grow further, it is essential to have the right knowledge and skills in the team. Attracting suitable talent is the biggest challenge for FinTechs, despite the fact that the Netherlands ranks number seven worldwide among highly educated employees[118]. This barrier is created by a tight labor market with a high demand for the same type of profiles. In order to ensure that the Netherlands retains the competitive advantage of highly educated talent, it is important that government policy of the Ministry of Education, Culture and Science contributes to closing the gap between (future) demand and supply from training institutes. As part of the policy agenda, the share of science and science graduates at hbo and wo level was already a point of attention in 2022, under the theme 'Training for the society of the future'. In 2019-2020, the percentage of graduates rose to 28% for university degree programs and 21% for hbo, compared to 21% and 18% respectively in 2011-2012[119]. In order to ensure that the demand from FinTech can be met in the long term, it is important that the inflow into science courses is increased. To this end, the Ministry of Economic Affairs and Climate Policy has developed the Green and Digital Jobs Action Plan, through which five sector organizations have responded with an action plan. Given the high demand for ICT professionals from FinTechs, representation from the FinTech sector would benefit the open coalition.

The financial sector is undergoing technological changes that bring many opportunities and challenges. There are opportunities for innovation and growth, but also threats to the Dutch competitive position. This technological change not only poses a threat to consumers and the labor market, but also offers opportunities for job creation and helping to develop digitally savvy citizens. To be successful, our efforts must be comprehensive and collective. These efforts would not only support the FinTech sector, but contribute more broadly to a healthy and independent Dutch business community. Both the public and private sectors need to take action. With these recommendations, we have strived to make a start towards the further development of the Dutch FinTech sector in the short and medium term.

[117] Netherlands Startup Employment 2022, FinTech market report Netherlands 2022, EY analysis 2023
[118] Coursera, Global Skills Report, 2022
[119] Ministerie van Onderwijs, Cultuur en Wetenschap, Beleidsagenda, 2022

Annex 1: Research methodology and approach

Scope used

The FinTech sector is characterized by its dynamic nature and rapid developments, making it difficult to apply a comprehensive FinTech definition. To ensure that the diversity of innovations within financial services is taken into account, the research uses the following scope:

- In accordance with the latest FinTech Census and the Financial Stability Board (FSB), 'FinTech' is defined as 'a technology-driven financial innovation that can lead to new business models, applications, processes or products with a material impact on financial markets, institutions and services[120].
- FinTech providers are in line with the previous FinTech Census. FinTech innovations and/or services can be offered by new entrants in the market, existing financial institutions, suppliers of software or by parties that originally operate outside the financial sector such as BigTech, telecom or retail companies. All these providers fall within the scope of the study
- From a geographical point of view, the scope is defined as companies and services that have been founded or developed in the Netherlands, or international FinTech companies that have an establishment in the Netherlands. For the latter category, the scope is limited to FinTech companies that have at least one employee within the Netherlands
- The FinTech service focuses on consumers, business customers such as SMEs, other (non-) financial institutions or public/non-profit parties
- The company form in which the FinTech innovation or service is offered is not limited in scope. The survey includes both independent FinTech companies and FinTech parties that are part of a financial institution, or that are part of a technology provider. In addition, regulated and unregulated institutions are included in the study

Interpretation of the study

- Established players are understood to mean the existing large banks, insurers, asset managers and pension funds
- Where possible, owners, founders and/or directors of FinTech parties are invited to take part in the research
- The basis for the research were the 635 FinTech parties identified in 2019, for representation from the previous edition
- The duration of the survey takes into account the Christmas holiday period
- Percentages are rounded to whole numbers
- Due to the size of the sample, cross-sections have been made where the sample size justifies it
- The categorization of services is in line with the previous research in order to be able to compare the development per subsector with the situation in 2019
- Documented quotes come from the interviews with the parties involved or the FinTech Focus group
- The stimulating and limiting factors as a summary included in Chapters 3 to 7 have been drawn up on the basis of information from the interviews, the answers to (open) survey questions and the FinTech Focus group
- The report only uses comparisons to the FinTech Census 2019 where relevant. When a comparison is made with 2019, unless otherwise stated, this refers to information from the FinTech Census 2019

[120] Financial Stability Board, FinTech, 2022

Approach to the research

The Dutch FinTech Census 2023 incorporated an online survey of Dutch FinTech companies, interviews and a focus group with FinTech companies, interviews with stakeholders such as regulators and industry associations and desk-based research.

Quantitative

- 126 online respondents completed the 15-minute survey, resulting in a 15% response rate. Compared to a population size of 861 FinTechs with a confidence level of 95%, this leads to an 8% margin of error in the reliability of the collected data
- Respondents are representative of population size with a corresponding top three services they offer, and comparable maturity (mean age of 12 years for population size versus average age of 9 years of respondents)
- Due to the greater involvement of parties with licensing or registration obligations on themes such as policy and regulation, these parties are overrepresented in the group of respondents compared to the entire FinTech sector
- The survey was completed by respondents who were working at a FinTech company at the time
- The survey could be completed from 3 November 2022 to 20 January 2023
- The survey focused on profile, target group and services, talent, capital, laws and regulations, government and regulators, and the Dutch business climate
- FinTech companies were invited via LinkedIn or email
- Promotion of the online survey took place via social media (Twitter and LinkedIn), online newsletters and meetings
- Incompletely completed questionnaires are not included in the analysis
- Surveys completed by parties that did not meet the FinTech definition have been removed

Qualitative

Focus group

- Six FinTech parties attended a three-hour focus group on 13 December 2022
- The group was representative of the FinTech sector. They came from different subsectors (e.g. InsurTech and mortgages), were of different sizes and differed in founding dates. Some of the FinTech parties are also active outside the Netherlands, and participants included both regulated and non-regulated parties.
- Several FinTech parties interviewed in 2019 attended the focus group
- On the basis of 10 statements, the four attributes that cover the FinTech ecosystem were discussed: market demand, talent, capital andpolicy. We then looked at the Dutch FinTech climate as a whole

Interviews

- We conducted 26, 45-minute interviews
- Interviews were conducted with FinTech companies, interest groups, trade associations and regulators
- The FinTech companies that took part are a good reflection of the sector. They come from different subsectors (e.g. software providers and Crypto), are of different sizes and differ in founding date. Both regulated and non-regulated parties were interviewed. Several FinTech parties that were involved in the FinTech Census in 2019 were interviewed again so that they could reflect on the changes they have experienced since 2019, including any impact of the FinTech action plan

Interviewed parties

FinTech	13
Supervisors	4
Interest groups/trade associations	9

Desk research

- The desk research consisted of a comprehensive analysis of existing, publicly available investigations and information
- References to these materials are included in footnotes and the list of sources, see Annex 2
- The country comparison is part of the desk survey. In line with the FinTech Census of 2019, the Netherlands is compared in this Census with the United Kingdom, Germany, France, Lithuania and Sweden. In this edition the Netherlands is also compared to Italy, Australia and Singapore. These countries were chosen because they have seen striking FinTech developments, a mature environment and active government policies
- The identified 861 FinTech companies were classified by year of establishment, location of the head office and the type of service provided by means of desk research:
    1. Online investing
    2. Lending (consumer credit)
    3. Digital banking
    4. Digital wallet and prepaid cards
    5. Online advisor/intermediary
    6. Payments
    7. Credit scoring and creditworthiness
    8. Asset management
    9. Insurance and InsurTech
    10. Business lending
    11. Personal financial management
    12. Capital market data and technology
    13. Financial Software
    14. Trade finance
    15. Cryptocurrencies
    16. RegTech and digital identity

Annex 2: Country comparison source list

Sources Lithuania

- Invest Lithuania, The FinTech Landscape in Lithuania, 2021 - 2022

Sources France

- CFTE, FinTech Companies in France | Full List, 2023
- FinTech Global, French FinTech investment on track to break records in 2022, 2022
- FinTech Belgium, The 2021 Landscape of French FinTechs on the opening of FinTech Revolution, 2021
- Sifted, Becoming a 'unicorn nation' is a public policy fallacy, 2022
- Long Finance, The Global Financial Centres Index 32, 2022

Sources Germany

- Germany Trade & Invest, FinTech in Germany, 2022
- EY, Startup Barometer Germany, 2022
- Statista, Average number of employees in startups in Germany from 2014 to 2022

Sources Sweden

- Business Sweden, A GREEN WAVE OF SWEDISH FINTECH, 2022
- Invest Stockholm, Stockholm FinTech, 2021
- McKinsey, Europe's FinTech opportunity, 2022
- Statista, Number of employed people in Sweden from 2001 to 2022, 2023

Sources Italy

- FinTech District en EY, FinTech Waves Italië, 2023

Sources United Kingdom

- UK government, Kalifa Review of UK FinTech, 2021
- EY, UK FinTech: Moving mountains and moving mainstream, 2020
- Great, FinTech, 2023
- Statista, Estimated number of employees in the FinTech industry in the United Kingdom (UK) from 2017 to 2030, 2022
- London Stock Exchange, The UK FinTech Ecosystem, 2022
- UK government, Making government deliver for the British people, 2023

Sources Singapore

- Monetary Authority of Singapore, FinTech and Innovation, 2023
- Statista, Number of FinTech companies in operation in Singapore 2018-Q3 2022, 2023
- UOB, FinTech in Singapore 1H2021: an innovation hub, 2021
- Monetary Authority of Singapore, A Future Ready Workforce for an International Financial Centre, 2022
- Humanresourcesonline.net, The state of FinTech in Singapore, from recruitment to salaries, 2023
- KPMG, Singapore FinTech takes market share in 2022 global funding fall, 2022
- Government of Canada, FinTech market in Singapore, 2022
- CFTE, Singapore FinTech Market Overview, 2022
- UK government, Kalifa Review of UK FinTech (case study Singapore), 2021

Sources Australia

- EY, FinTech Australia Census, 2022
- FinTech Australia, Australian FinTech: Leading The World, 2023
- KPMG, Australian FinTech survey report, 2022

Sources The Netherlands

- CB Insights, FinTech trends, 2022
- TechLeap, Netherlands Startup Employment, 2022
- European Commission, Digital Economy and Society Index (DESI), 2022

Table country comparison

- IMD, World Digital Competitiveness Ranking, 2022
- IMD, World Talent Ranking, 2022
- Tax foundation, INTERNATIONAL TAX COMPETITIVENESS INDEX, 2022
- Financial Stability Institute, FSI Insights on policy implementation No 23, 2020
- U.S. News, These Countries Have the Easiest Access to Capital, 2023

Authors

Jeroen van der Kroft
Martijn Gerritsen
Daphne Sweers
Janne Lemmens

Contact persons

Jeroen van der Kroft
Partner
EY Financial Services Consulting
+31 6 21 25 11 75
Jeroen.van.der.Kroft@nl.ey.com

Martijn Gerritsen
Senior Manager
EY Financial Services Consulting
+31 6 55 44 24 76
Martijn.Gerritsen@nl.ey.com

Daphne Sweers
Senior Consultant
EY Financial Services Consulting
+31 6 29 08 31 85
Daphne.Sweers@nl.ey.com

Janne Lemmens
Consultant
EY Financial Services Consulting
+31 6 55 44 25 42
Janne.Lemmens@nl.ey.com

EY | Building a better working world

EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

ED None

ey.com