

THE GERMAN FINTECH MARKET

A RETROSPECTIVE
AND PREDICTIVE
ECOSYSTEM REPORT

DUTCH PROSPECTS
AND OPPORTUNITIES

FinTech Consult & Contextual Solutions



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Introduction

Germany is a significant FinTech market and among the largest worldwide. Many foreign B2C- and B2B-FinTech companies have started operations in Germany, attracted by Germany's sizeable retail market of 83 M citizens, its 3.5 M small-and-medium-sized enterprises¹ (the so-called "Mittelstand"), and its large number of domestic financial institutions, including 1,500+ banks.²

European passporting rules make it easier for FinTech start-ups to explore new jurisdictions as they grow. Among all European markets, Germany remains attractive for European FinTechs due to its position, size, and economic power. However, due to its history, size, and culture, specific challenges and opportunities await the companies entering the market, even those coming from neighboring countries.

In continental Europe, the Netherlands is another one of the up-and-coming FinTech hubs. However, due to the limited market size, local FinTechs with attractive value propositions must quickly start looking for expansion opportunities. The Ministry of Finance in the Netherlands conducted a study on the Dutch FinTech sector and its growth opportunities in 2019 to reveal the status quo. At that time, it was concluded that it faced a challenge in scaling up abroad.

The FinTech markets in Germany and the Netherlands are booming and share some characteristics. Nevertheless, as a FinTech, it is not easy to use one country's experience and best practices to successfully start in the other one. Despite many contacts and joint activities between German and Dutch FinTech hubs and associations like Holland FinTech since 2016,³ it is still challenging to maintain a comprehensive overview of the mutual FinTech landscapes, including major trends, opportunities, and challenges.

Therefore, **FinTech Consult** and **Contextual Solutions** were commissioned to prepare a study about the German FinTech ecosystem in Q3 2022 on behalf of the Netherlands Enterprise Agency (RVO) and the Netherlands Business Support Office (NBSO) Frankfurt am Main.

The study uses unique market insights, research, and interviews with German FinTech ecosystem stakeholders while shedding light on the whole ecosystem. The primary goal of the analysis is to provide a market overview. In addition, the study aims to create a source that:

- Serves as an all-in-one resource for the status quo and trends in the German FinTech ecosystem,
- highlights the regional focal areas and relevant stakeholders,
- provides an overview of the investment trends in Germany, specific related to FinTech,
- addresses the opportunities and the challenges for foreign FinTech companies, with a particular Dutch market focus, when accessing the German market, and
- formulates recommendations for the internationalization of Dutch FinTech companies towards Germany.

The authors trust that the study will help Dutch FinTechs gain a foothold in the German market and diversify the financial services offered to German clients.



December 2022
FinTech Consult & Contextual Solutions

¹ BVMW, 2022, [URL](#)

² Bundesbank, Bank office statistics in 2021, [URL](#)

³ FinTech Consult, Joint Dutch/German FinTech Matchmaking Events, November 2016, [URL](#)

Executive Summary

The German FinTech market is the strongest candidate for the "EU FinTech Hub" and is growing as we speak. The market offers an extensive playground, stability, economic consistency, and an untapped digital finance potential.

The particularities of the German market create both opportunities and challenges for newcomers, which was intended to be identified through this study. Starting with exploring the German market and the German FinTech ecosystem, this study offers a deep dive into the digital market atmosphere. First, newcomers are recommended to get informed about the market (chapter 1) and then understand the cultural and financial dynamics (chapter 2) along with the current developments (chapter 3). Only then the specific market entry recommendations (chapters 2 and 3) will make sense.

The study provides a general overview and recommendations for all foreign FinTech companies intending to expand to Germany. Nonetheless, as the report is prepared specifically for Dutch FinTech companies, the study includes an additional Dutch FinTech focus, exploring differences between the neighboring ecosystems (chapter 2) and identifying synergies (chapters 2 and 3). Germany is one of the world's largest, most vibrant, and attractive start-up ecosystems. There are more than 70,000 start-ups in highly specialized sectors, including almost 1,000 active FinTechs. The FinTech sector in Germany planted its first seeds in the early 2010s. Many FinTechs are now in the scale-up phase, step-by-step becoming profitable. Among them are 13 unicorns. In 2021, about €6 B was invested in German FinTechs – a new funding record. Germany has a diverse domestic ecosystem with insurance, payment & remittance, and blockchain & digital assets being the three strongest verticals in terms of the number of start-ups and banking, payment & remittance, and capital markets in terms of valuation. M&A activity has been high over recent years.

Neobanks and -brokers are popular among younger people. Cash is still widely used in Germany, but cashless payments are rising. The German regulatory authority BaFin strictly applies its principle of 'same business, same risks, same rules' to all financial institutions, including FinTech start-ups. On the other hand, BaFin's website is an excellent information source on applicable EU and German legislation for the different business verticals related to FinTech.

Establishing operations in Germany, Dutch FinTechs need to be aware of certain market specifics. Despite the German and the Dutch market sharing various similarities, minor and major differences related to business culture, consumer behavior, ecosystem infrastructure and regulation exist. Overall, market conditions in Germany are advanced but lagging behind the Netherlands. Understanding the impact of German market specifics on the business strategy as well as related opportunities and challenges is crucial. This also applies to localization. The German market provides different hubs with varying qualities that FinTechs should align with their own needs (e.g., network, initiatives, local industries etc.). When entering the German market, Dutch FinTechs should consider collaborating with a bank to get access to existing licenses and customers.

Additionally, the sizable German SME segment can be a promising starting point. Being under increasing pressure to digitalize and still relying greatly on traditional financial services, German SMEs can be considered a promising target group.

Germany is a sizeable market in terms of its potential, though it is particular in terms of market needs, as the local consumers and companies have different expectations and needs compared to other markets. The historical and cultural differences make it harder for foreign financial service providers to find B2B or B2C pilot customers and raise interest. Although we have been observing a positive digital finance and start-up trend in Germany in the aftermath of both Brexit and the pandemic, the recent developments, including the Russian invasion of Ukraine, economic turmoil, inflation, and start-up valuation downturns, have changed the perception and priorities of the locals. In light of the insolvencies of market players (Nuri, Ruuky) and the many layoffs that were announced in Q3 and Q4, market players are less experimental and cautious. They are preparing for a "tough winter." Considering the more challenging economic conditions and the changing customer needs, new market players will need to be more prepared and resilient. In this scope, newcomers are expected to examine the local success factors, adjust to current economic conditions, double-check their assumptions with their ideal client base, and look into some of the expansion strategies that have proven successful in the market. Many FinTech verticals, such as embedded finance, BaaS, and open finance, seem to be "evergreen" for the market. Additionally, some topics, such as financial education and inclusion, are

underserved domestically, and the demand is likely to grow especially considering the growing expat and immigrant base Germany intends to attract in the upcoming years. More information about the current and forthcoming trends is included in chapter 3, along

with a German market compatibility checklist, which intends to serve as a base for both newcomer and existing foreign FinTechs in the German market.

Close Up: German Market Opportunities

Throughout the study, various opportunities for Dutch FinTechs in the German market are outlined. First, they derive from the **market size and its FinTech-friendly ecosystem**:

- The population of 83 M makes Germany the largest market in Europe, demonstrating its potential for FinTechs to offer B2C solutions and grow their user base.
- With around 3.5 M enterprises, Germany also offers a huge opportunity for providing B2B solutions, particularly for the comparably traditional SME sector.
- The sizeable German banking sector, consisting of 1,519 financial institutions, demonstrated openness towards FinTech solutions in recent years and – in turn – can offer a regulatory umbrella for FinTechs, and access to customers.
- Despite German consumers being less digitally savvy, FinTech solutions are increasingly understood and accepted.
- Germany offers several different hubs providing FinTechs with knowledge, talent, network, funding, and initiatives to boost innovation.

Additional opportunities are arising from the **excellence of Dutch FinTech** that can be valuable when entering the German market:

- The Dutch FinTech ecosystem is among the most advanced worldwide, enabling a level of innovation that provides crucial advantages in international competition.
- This shows in the remarkable number of globally renowned products Dutch FinTechs have created, also demonstrating the entrepreneurial skills needed to succeed in the German market.
- Having established an almost cashless society, the Netherlands is far more advanced than Germany. With the digitalization of payments being on the rise in Germany, Dutch solutions can potentially be rolled out in the German market in the future (e.g., the introduction of the digital euro).

Lastly, **recent market trends** are reinforcing the factors mentioned above and are creating additional opportunities:

- With German SMEs, banks, and public institutions lagging in digitalization, the pressure to digitalize will increase over the following years to preserve competitive advantages. Consequently, digitalization initiatives and budgets are expected to rise.
- The Covid-19 pandemic and economic turmoil caused by Russia's invasion of Ukraine are creating additional pressure to digitalize and improve business efficiency.
- The current German government is increasingly aware of the importance of innovation which is reflected in several initiatives that aim to strengthen local start-up and FinTech ecosystems.
- Despite the FinTech market having reached a state of maturity in the past years, there are still segments with relatively low competition and increasing demand. Those include B2B solutions for SMEs, embedded finance, open finance, financial education, sustainable banking, blockchain and digital assets as well as cybersecurity and fraud prevention.

The opportunities and challenges laid out above and throughout the study should be assessed on a case-by-case basis as the size of the German market, and the cultural patchwork of the German society (increasing immigration, East-West dynamics, historical patterns) make it hard to identify standard and de facto prospects. However,

- asking the right questions before entering the market (chapter 3),
- understanding the culture and respecting the customs (chapters 1 and 2), and
- integrating through localization (chapters 2 and 3)

would give beginners an advantage in the local market.

After digesting the study, FinTech companies interested in the German market are advised to test their readiness and compatibility through the checklist provided in chapter 3.

Chapter 1:

German FinTech Landscape and Overview

About this Chapter

This chapter aims to explain the status quo of the German FinTech market, starting with a brief description and assessment of the German market in general. The chapter will later discuss the German cultural elements and their impacts on the financial sector. Last but not least, regulations will be briefly examined as regulations and licensing requirements can quickly turn into a make-or-break factor in the German FinTech ecosystem.

Chapter Outlook

This chapter begins by assessing the German FinTech landscape, providing statistical information, and informing about major players and recent M&A deals. Sections 1 to 6 will provide general information about the market and the financial sector, including essential hubs, players, funding, and M&A deals. Sections 7 and 8 cover recent developments and give an overview of German consumer behavior and market needs. The last two sections, 9 and 10, introduce German financial regulation, regulatory authorities, and licensing issues.

The purpose of this chapter is to provide an overview of the most relevant issues before diving into more detailed questions in the following two chapters

1 Brief Overview: German Market

1.1 German Market Basics

Germany is Europe's biggest economy and market. Small and medium-sized enterprises drive the market and dynamic trade relationships within Europe and beyond offer plenty of business opportunities.

Some key facts about Germany:⁴

General			
Population:	84.1 M (2022) ⁵	Size:	357,022 sq.km ⁵
GDP (nom.):	€3,858 T (2022) ⁶	GDP per capita (nom.):	€45,874 ⁶
Economic growth:	0.1% (Q2 2022) ⁵	Inflation rate:	10.0% (09/2022) ⁵
Employment:	45.4 M (08/2022) ⁵	Unemployment rate:	3.0% (08/2022) ⁵
Exports:	€1,376 B (2021) ⁵	Imports:	€1,203 B (2021) ⁵
Patent applications:	25,969 (2021) ⁷	Patent rank in Europe:⁸	#1 (2021) ⁷

⁴ Germany Trade & Invest, The German Market - Europe's Economic Hub, [URL](#)

⁵ Federal Statistical Office of Germany (Statistisches Bundesamt), [URL](#)

⁶ Eurostat, [URL](#)

⁷ European Patent Office, Country dashboards / Germany, [URL](#)

⁸ Among the 38 member states of the European Patent Organization, including EU-27

Germany's economic policies enhance a broad and competitive industrial environment with a strong focus on innovative future technologies. Many small and medium sized enterprises utilize this potential, making them leaders in their respective markets. Across industries large and small, German products are worldwide export hits. According to recent studies, Germany ranks as the top investment location in Europe. Along with its relative economic stability, Germany is the largest domestic market within Europe, creating a large and stable customer base for investors.

Germany's integration into the world economy also allows companies to gain and share knowledge, products and employees within a global network.

In terms of nominal unit labor costs, Germany has gained in productivity over the past decade. While some European countries are showing a substantial increase in nominal unit labor costs, Germany has registered a moderate growth of around just 2%. As a result, Germany has become more competitive – particularly in manufacturing.

Production in German manufacturing is highly automated. According to the International Federation of Robotics, 346 industrial robots per 10,000 employees have been in operation in 2019. In absolute terms, 20,500 industrial robots were deployed in that year alone. Today, Germany is the European leader in industrial automation. Clients in the automotive and electronics industries are the primary beneficiaries of industrial robot installation.⁹

1.2 German Financial Market

This section highlights some key figures of the German financial industry, separately for its capital markets, banking, insurance, and asset management pillars.

Germany is home to eight stock exchanges,¹⁰ a derivatives exchange (Eurex), and an energy exchange (EEX). The oldest stock exchange is in Hamburg, founded in 1558. The most active one by trading volume today is in Frankfurt, founded slightly later, in 1585, and operated by Deutsche Börse.

Capital Markets

Domestic market cap.:	€1,571 B (09/2022) ¹¹	Listed companies:	502 (09/2022) ¹¹
Trading volume:	€1,765 B (2021) ¹¹	Number of stock exchanges:	8

⁹ Germany Trade & Invest, Productivity in Germany, [URL](#)

¹⁰ Frankfurter Wertpapierbörse, Börse Stuttgart, Hamburg/Hannover Börsen AG, Börse Berlin, Börse Düsseldorf, Börse München, gettex, Tradegate

¹¹ FESE, Statistics, [URL](#)

The German banking system consists of three pillars with distinctive legal and ownership structures:

1. private commercial banks, 2. public-sector banks, and 3. cooperative banks. The banking sector had 540,950 employees in total in 2021.¹²

Banking			
Number of banks (2021):	1,519 ¹³	Number of branch offices (2021):	21,712 ¹³
• thereof commercial banks:	261 ¹³	• thereof commercial banks:	5,199 ¹³
• thereof saving banks:	371 ¹³	• thereof saving banks:	7,732 ¹³
• thereof cooperative banks:	772 ¹³	• thereof cooperative banks:	7,310 ¹³

The German insurance industry is one of the largest in Europe. Among its insurance companies are some of the largest insurers globally, such as Allianz Group or Munich Re. More than half a million employees and self-employed agents are active in the industry.

Insurance			
Number of primary insurance undertakings (2020):	563 ¹⁴	Number of reinsurance undertakings (2020):	35 ¹⁵
Gross primary insurance premiums (2020):	€236.1 B ¹⁰	Gross reinsurance premiums (2019):	€68.3 B ¹⁰

A total of around 700 fund companies are active in the German market, ranging from independent fund boutique banking to subsidiaries of insurance companies.¹⁶

Asset Management			
Total assets under management (2021):	€4,334 B ¹⁷	AuM sustainable funds (2021):	€718 B ¹⁸
Number of open domestic investment funds (08/2022):	7,649 ¹⁹	AuM open domestic investment funds (08/2022):	€2,577 B ¹⁷

¹² Bankenverband, Beschäftigte, [URL](#)

¹³ Bundesbank, Number of credit institutions as of 31 December 2021, [URL](#)

¹⁴ BaFin, Erstversicherungsstatistik 2020, [URL](#)

¹⁵ BaFin, Statistik – Rückversicherungsunternehmen 2019/2020, [URL](#)

¹⁶ BVI, About the industry, [URL](#)

¹⁷ BVI, Investment statistics, [URL](#)

¹⁸ BVI, The German sustainable fund market, [URL](#)

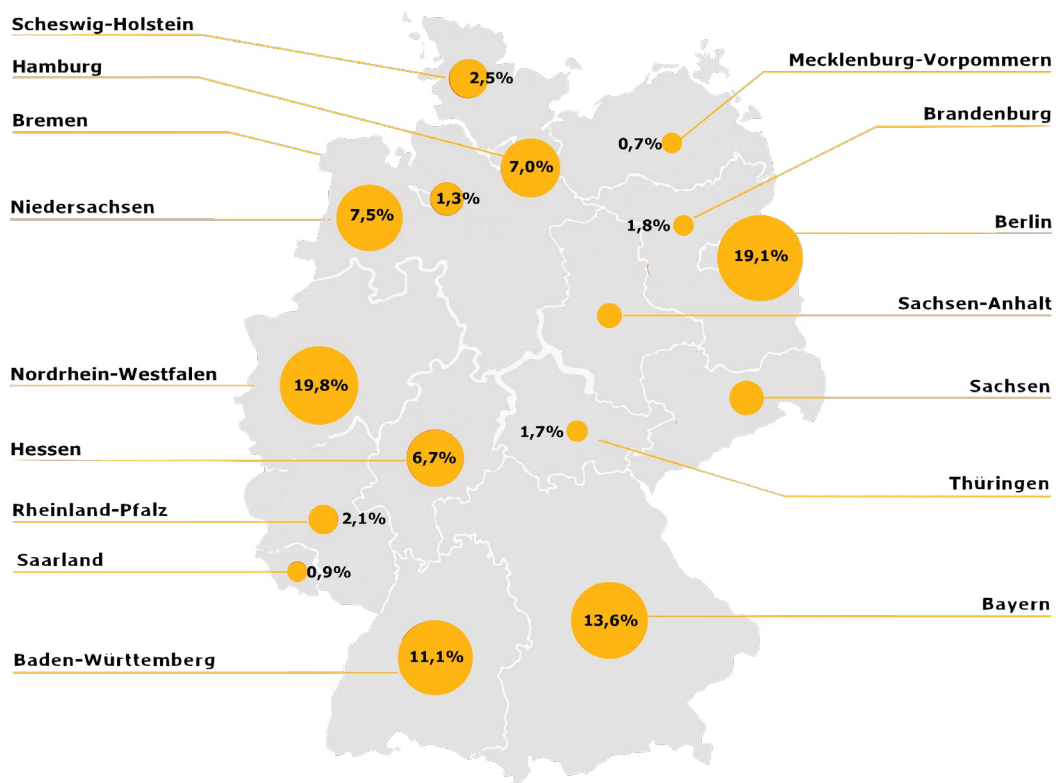
¹⁹ Bundesbank, Investmentfondsstatistik, [URL](#)

1.3 Start-ups in Germany

Germany is one of the largest, most vibrant, and attractive start-up ecosystems in the world. There are more than 70,000 start-ups in highly specialized sectors across the country. Hundreds of entrepreneurship centers, innovation hubs and acceleration programs across Germany produce around 3,000 new start-ups each year.²⁰

Most of the German start-ups are active in the ICT sector (29.7%), followed by the medical & health sector (10.6%) and food & consumer goods markets (10.2%). FinTechs account for 3.1%.²¹

Regional distribution of the headquarters of German start-ups (2022)



Source: German Start-up Monitor 2022 ²²

Among start-up entrepreneurs, diversity is an ongoing topic. Nowadays, the percentage of female founders is on the rise with 20.3% in 2022 (2021: 17.7%) but still far away from parity. Almost half of all start-ups (45.0%) are less than two years old, while just under one-fifth are five to ten years old (17.9%). The average start-up age is 2.8 years. Almost three quarters (72.9%) of the start-ups are in the seed or start-up stage. Just under one in four start-ups (23.2%) is in the growth stage.²³

20 Germany Trade & Invest, Start-up Location Germany, [URL](#)

21 Bundesverband Deutscher Startups, 2022, [URL](#)

22 Ibid.

23 Ibid.

1.4 FinTech Sector in Germany

The FinTech sector in Germany planted its first seeds in the early 2010s. Pioneers of the then-novel business models such as neobanks, digital and P2P lenders, digital wallets, and payment solutions started emerging in the first wave. Following a proof of concept and regulatory clarification phase, many of these FinTechs are now in the scale-up phase, step-by-step becoming profitable, after the 2018 peak of new FinTechs. In 2021, about €6 B was invested in German FinTechs – a new funding record. Compared with recent years, 2022 is also on track to be a very successful year. Due to the significantly poorer second half of the year, the record set in 2021 will probably not be matched.

Between 2014 and 2017, the ecosystem focused mostly on talent, accelerators/incubators, investors, first regulations & events. Since 2018, the focus has been shifting towards new trends, e.g., AI in Finance, Blockchain, and Green/Sustainable FinTech.

During the pandemic, a boom in retail brokerage due to zero-commission models and mobile one-click trading could be observed. Furthermore, cashless payments have been rising steadily since.

2 FinTech Hubs in Germany

The FinTech ecosystem in Germany is scattered. Several hubs (Berlin, Frankfurt, Hamburg, Munich, Cologne, Stuttgart) exist, each with a decent share of a total number of FinTechs. Among the top ones, Frankfurt is home to many B2B FinTechs, while Berlin is focused primarily on B2C due to its e-commerce roots. The German FinTech hubs show different specializations and development trends.²⁴

2.1 Digital Hubs

In 2017, Germany started its [Digital.Hub initiative](#) (de:hub) to promote digital transformation. The initiative is a brainchild of [bitkom](#) and began with five hubs initially. [The German Federal Ministry of Economic Affairs and Climate Action](#) is responsible for the twelve digital hubs in this scope. The digital hubs offer a strong network for fostering innovation and exchanging best practices in technology and business.

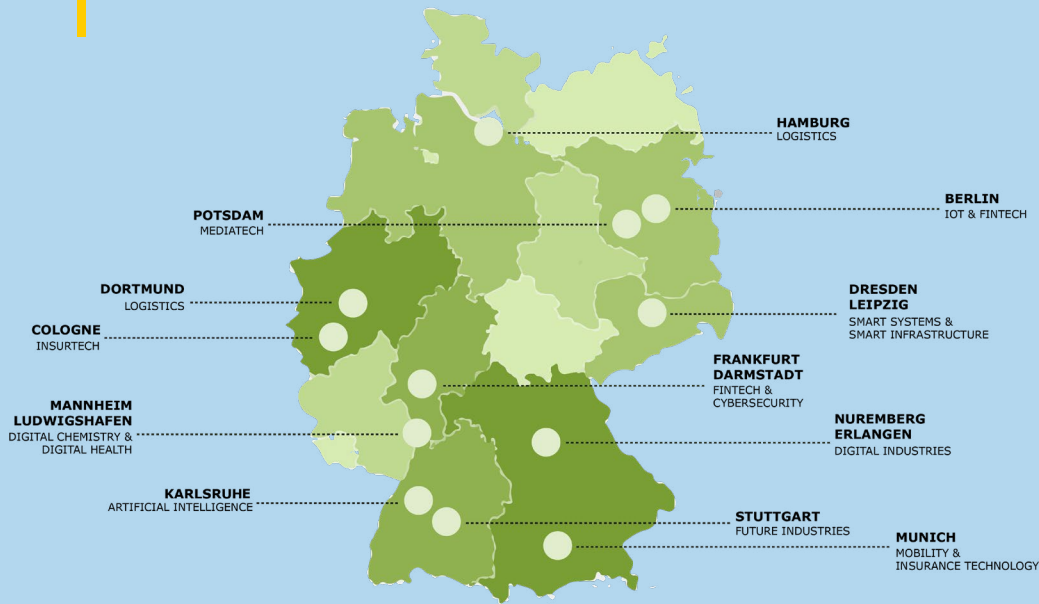
Four of the twelve hubs (Berlin, Frankfurt, Cologne, and Munich) focus on FinTech & InsurTech topics.²⁵

Frankfurt and Berlin are the two official FinTech hubs assigned by the German government as part of its digital hub strategy (de:hub). As for InsurTech, Cologne and Munich are replacing Frankfurt and Berlin as official hubs. National & international FinTechs use Frankfurt to meet and do business with German financial institutions and corporates. Many foreign start-ups have recently come to Frankfurt and Berlin, particularly from elsewhere in the EU, Israel, and various Asian countries.

Berlin attracts many developers and excels in the Digital Banking and Blockchain/Crypto verticals. The key topics in Frankfurt are Open Banking and RegTech, driven by rich process & infrastructure expertise locally as well as the presence of several German & EU regulatory authorities.

²⁴ Germany Finance, 2021, [URL](#)

²⁵ For the remainder of this study, InsurTech will be considered a part of FinTech.



These FinTech ecosystems are now important pillars of modern financial centers.

German financial centers generated €122 B gross value added and employed 1.1 M people in 2020. A detailed overview of German FinTech hubs is provided in **chapter 2, section 2.1.**

Source: German Federal Ministry of Economic Affairs and Climate Action

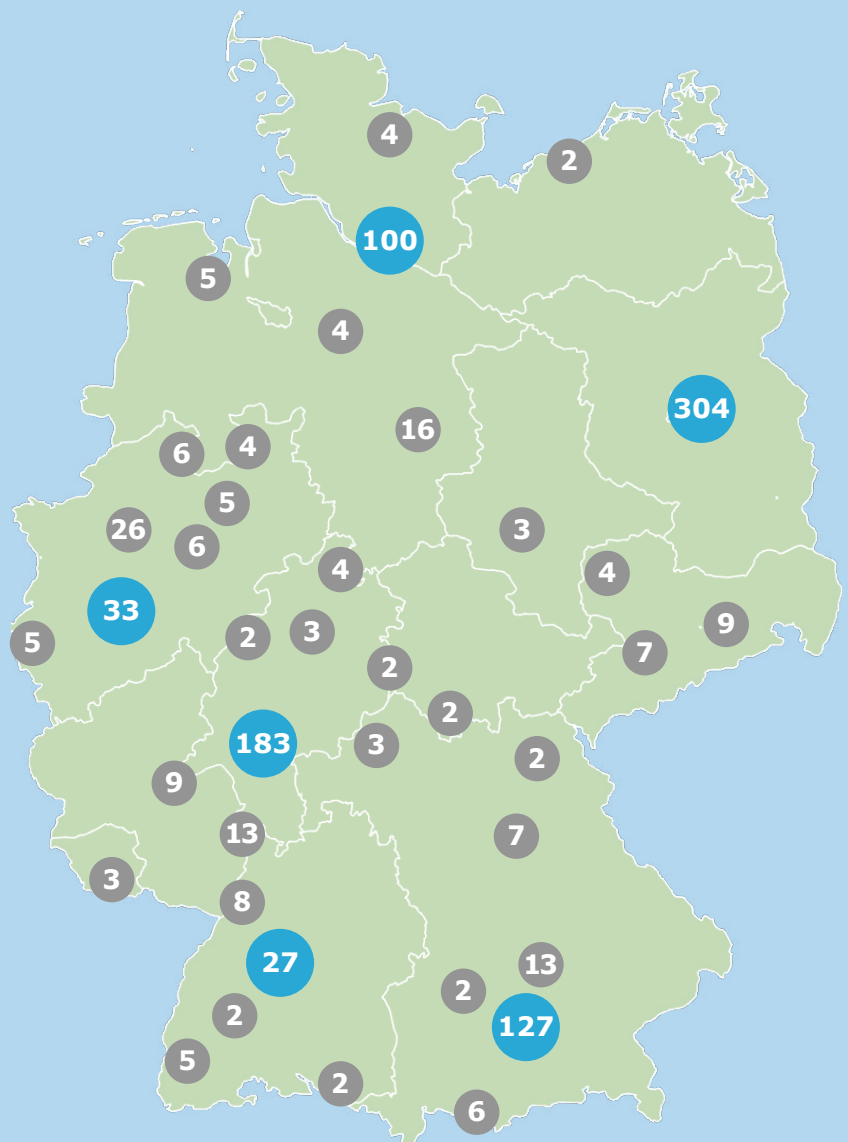
2.2 German FinTech Map

As of 15 August 2022, our database comprises 1,067 German FinTechs, of which 98 are closed.

The remaining 969 FinTechs are shown on the map.

Most of the FinTechs in this group are located in the major FinTechs hubs: Berlin, Frankfurt am Main, Munich, Hamburg, Cologne and Stuttgart.

[LIVE VIEW](#)



3 Noteworthy Players

3.1 FinTech Unicorns

Excluding listed companies, as of 15 August 2022, Germany has thirteen FinTech unicorns – a significant increase from the nine unicorns a year before:

CHECK24

Founded in 1999
Private company
Comparison portal, platform for financial services, neobank
2000+ employees
15M+ customers
€500 M revenues already in 2015/2016 (no figures published since)
<https://www.check24.de>

N26

Founded in 2013
Private company
European neobank
€112 M revenues in 2020
7M+ clients in 25 countries
1,500+ employees
Valuation of €8.0 B after \$900 M Series E in October 2021
<https://n26.com>

Sumup

Founded in 2011 as a UK Limited by German founders, headquartered in London & Berlin
Private company
Mobile card payment terminal provider
3000+ employees
3M+ business clients in 33+ countries
Valuation of €8.0 B after €590 M financing round in June 2022
<https://www.sumup.com>

Trade Republic

Founded in 2015
Private company
Neobroker
700+ employees
2M+ customers
€6B+ assets under management
Valuation of €5.0 B after raising €250 M in June 2022
<https://traderepublic.com>

MAMBU

Founded in 2011
Private company
Banking SaaS provider
€32 M revenues in 2020
900+ employees
Valuation of €4.9 B after €235 M round in December 2021
<https://mambu.com>

Wefox

Founded in 2015
Private company
B2B2C platform that connects carriers, agents & insurers
€320 M revenues in 2021
2M+ clients in Europe
700+ employees
Valuation of €4.5 B after raising \$400 M in July 2022
<https://www.wefox.com>

Solaris

Founded in 2016

Private company

Banking-as-a-Service provider

700+ employees

Valuation of €1.6 B after €40 M financing round in June 2022 and €190 M in July 2021

<https://www.solarisgroup.com>

Scalable Capital

Founded in 2014

Private company

Digital wealth management

400+ employees

€4+ B assets under management

Valuation of €1.3 B after €150 M financing round in June 2021

<https://de.scalable.capital>

Smava

Founded in 2007

Private company

Consumer loan portal

400+ employees

€162 M revenues in 2021

Valuation of €1.1 B after merger with Finanzcheck in 2021

<https://www.smava.de>

SellerX

Founded in 2020

Private company

E-commerce marketplace aggregator

400+ employees

Valuation of €1.0 B after \$500 M venture round in December 2021

<https://sellerx.com>

Grover²⁶

Founded in 2015

Private company

Financing platform for tech products

€140 M revenues in 2021

250,000+ clients in Europe

500+ employees

Valuation of €1.0 B after €305 M round in April 2022

<https://www.grover.com>

Clark

Founded in 2015

Private company

Insurance platform

€15 M revenues in 2020

500,000+ clients in Europe

500+ employees

Valuation of €1.0 B after \$69 M Series C in January 2021

<https://www.clark.de>

²⁶ Grover is an embedded finance player that combines FinTech elements in consumer finance with tech sourcing. It is left to the readers to decide whether they consider Grover a FinTech or not.

Taxfix

Founded in 2016

Private company

Tax returns

€13 M revenues in 2020

400+ employees

Valuation of €1.0 B after \$220 M Series D in April 2022

<https://taxfix.de>

Among the five new unicorns are Clark, Grover, sellerX, smava, and taxfix

3.2 Valuation Development

The nine existing unicorns performed quite differently in terms of their valuations:

	Valuation as of July 2021	Valuation as of August 2022	Change YoY
Check24	unknown	unknown	N/A
N26	€3.6 B	€8.0 B	+122%
Sumup	€1.0+ B	€8.0 B	+700%
Trade Republic	€4.3 B	€5.0 B	+16%
Mambu	€1.7 B	€4.9 B	+188%
Wefox	€2.7 B	€4.5 B	+67%
Solaris	€1.4 B	€1.6 B	+14%
Scalable Capital	€1.3 B	€1.3 B	0%
raisin ²⁷	€1.3 B	€895 M	-23%

For those FinTechs which have not been funded yet in 2022 significant uncertainty remains due to the reduced valuation of several international FinTechs in the first half of 2022 (e.g., Klarna, down from \$45.6 B in July 2021 to \$6.7 B in July 2022, -85%).

²⁷ Raisin lost its unicorn status on May 2022 due to a downward valuation correction of one of its investors. The devaluation was said to happen due to the slow growth, [URL](#)

4 Ecosystem Growth

4.1 Number of FinTechs

German FinTech ecosystem growth has had its ups and downs since 2018. From 2013 to 2018, the number of FinTech companies grew by 25% p.a. From 2018 to 2021, this growth went down to 9% p.a., showing signs of market saturation.

Existing FinTech Companies in Germany

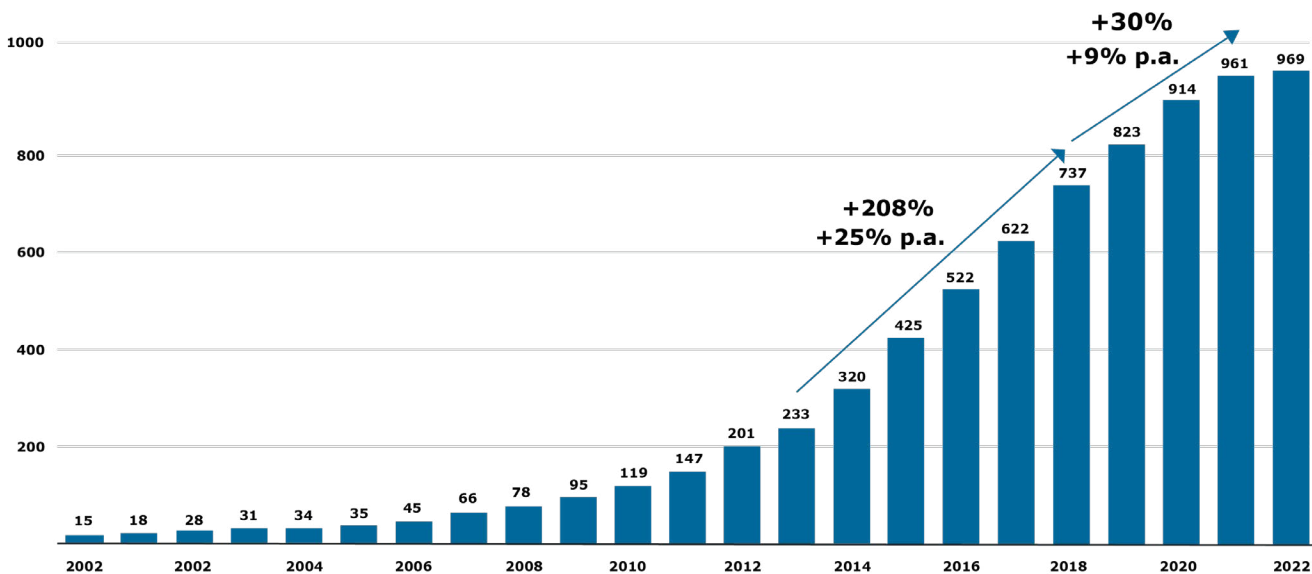


Chart Data as of August 15 2022

Source: [FinTech Consult](#)

The most substantial period of ecosystem growth was between 2014 and 2020, with 737 FinTechs entering the market. In 2021, despite a record in total funding, only 78 new FinTechs entered the market.

New FinTech Companies in Germany

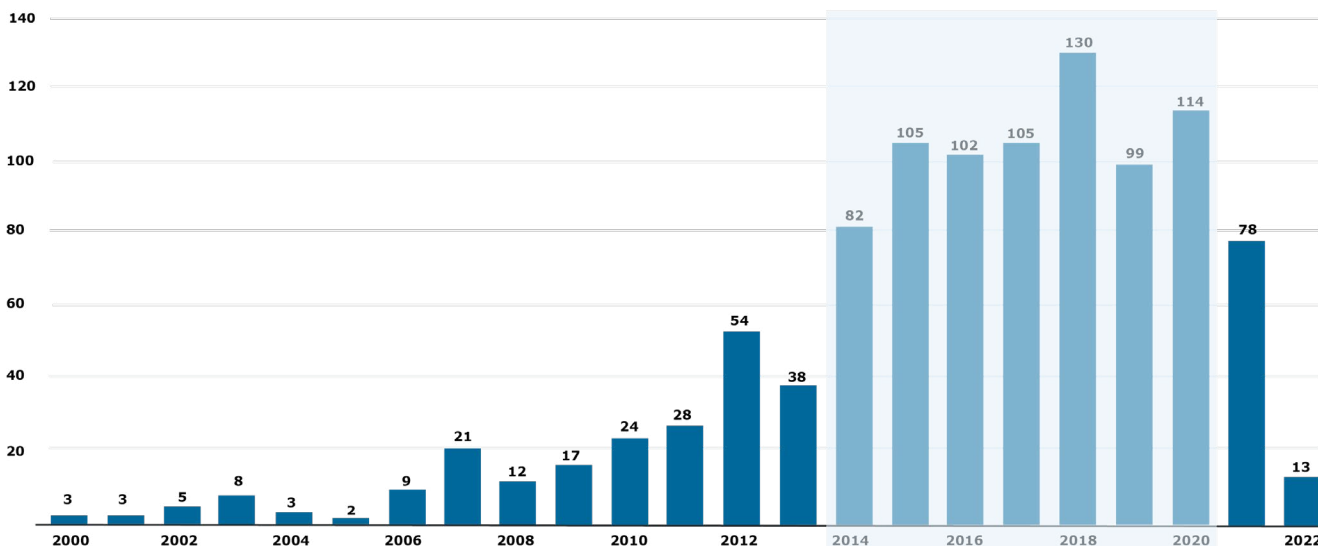


Chart Data as of August 15 2022

Source: [FinTech Consult](#)

More FinTechs have closed their businesses since 2018, also indicating a maturing ecosystem. 54 FinTechs exited the market during the pandemic in 2020 and 2021, a significant increase from previous years.

Closed FinTech Companies in Germany

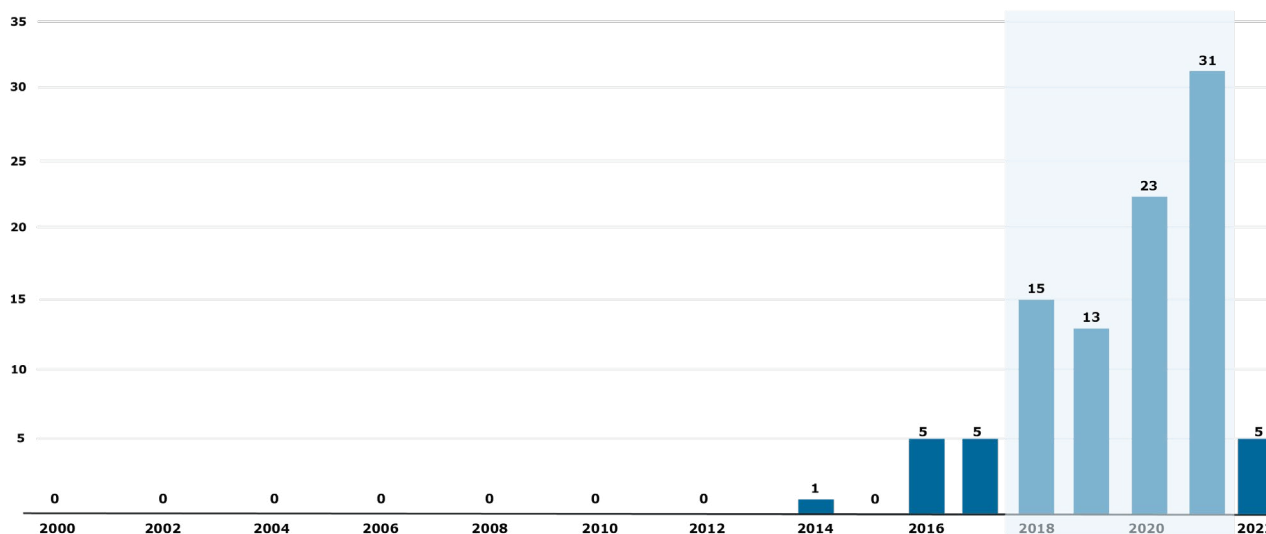


Chart Data as of August 15 2022

Source: [FinTech Consult](#)

4.2 Venture Capital Funding

2021 was a record year with a total financing volume of almost €6 B, an increase of 356% compared to 2020. The year 2022 looks promising again, but the total financing volume could be slightly lower than in 2021.

Funding Rounds of German FinTech Companies

Total capital raised [mill. €] # of companies with funding rounds Average size [mill. €]

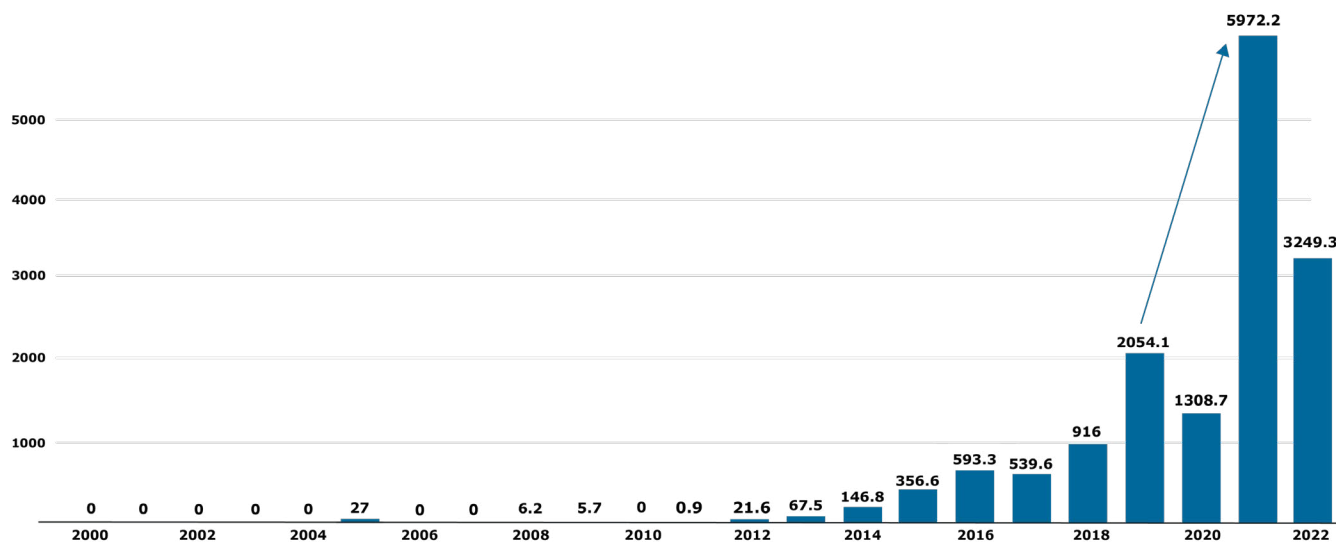


Chart Data as of August 15 2022

Source: [FinTech Consult](#)

In 2021, 135 FinTechs had funding rounds, a significant increase compared to 2020 and before. In 2022, there have been 71 rounds so far as of August. Market insights indicate that 110-120 FinTechs with funding rounds at the year-end can be expected.

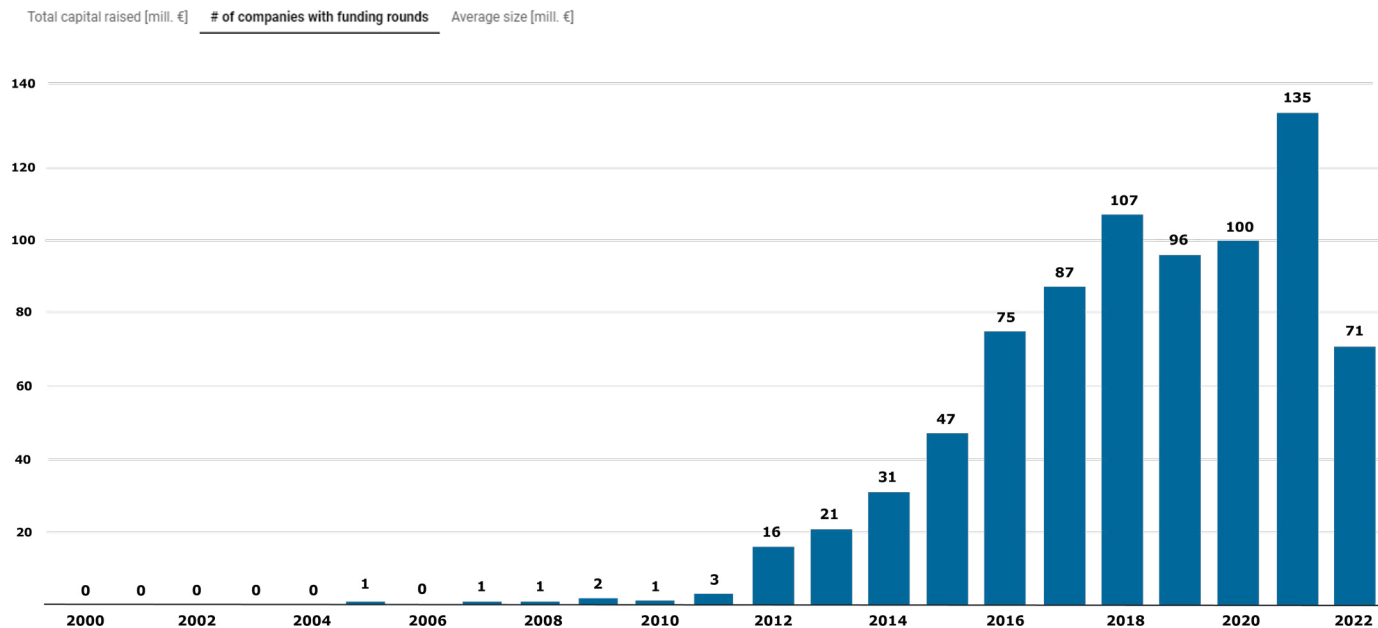
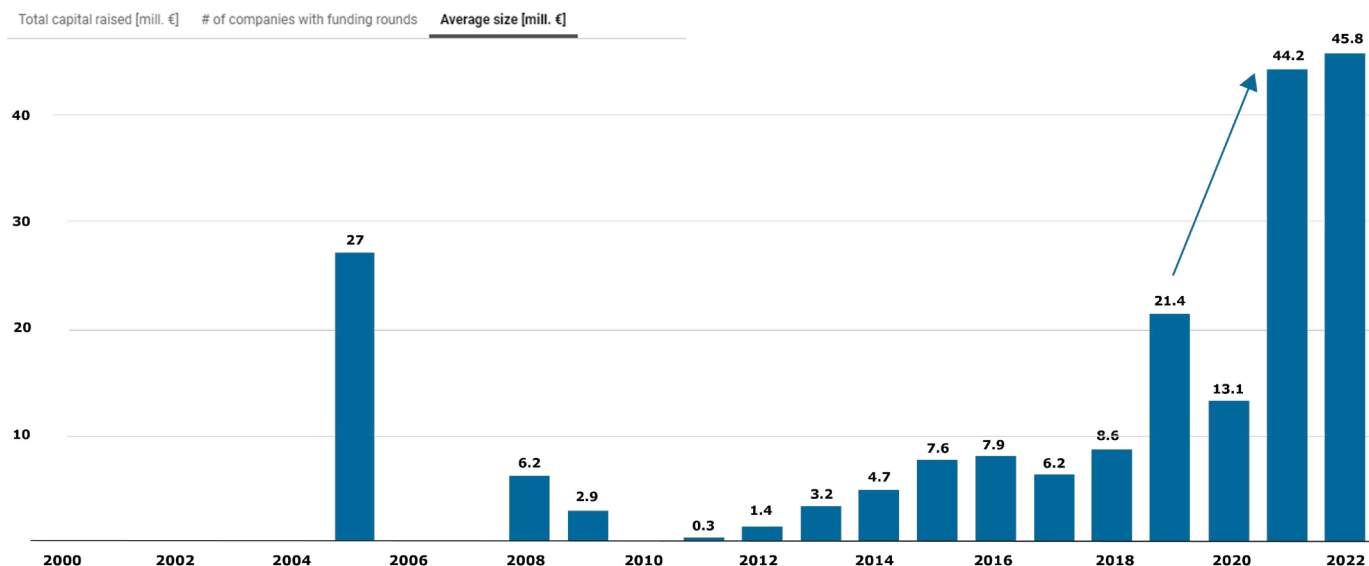


Chart Data as of August 15 2022

Source: [FinTech Consult](#)

In 2021, the average funding size increased dramatically to €44 M. The average volume has risen even further in the current year, to €46 M.



Source: [FinTech Consult](#)

4.3 Top Funding Rounds

Top funding rounds in 2021			Top funding rounds in 2022		
N26	€775 M	(Oct)	Sumup	€590 M	(Jun)
Sumup	€750 M	(Mar)	Wefox	€400 M	(Jul)
Trade Republic	€615 M	(May)	Grover	€305 M	(Apr)
SellerX	€570 M	(Mar-Dec)	Heimkapital	€300 M	(Jan)
Wefox	€530 M	(Jun)	Finn	€290 M	(May)
Finn	€500 M	(Dec)	Trade Republic	€250 M	(Jun)
Mambu	€345 M	(Jan, Dec)	Taxfix	€208 M	(Apr)
Solaris	€190 M	(Jul)	Vivid Money	€100 M	(Feb)

5 Ecosystem Diversity and Valuation

Classifying FinTech companies into 29 different categories, highlights a pretty diverse domestic ecosystem with insurance (104), payment & remittance (95), and blockchain & digital assets (72) being the three strongest verticals in terms of the number of start-ups.

Categories of German FinTechs

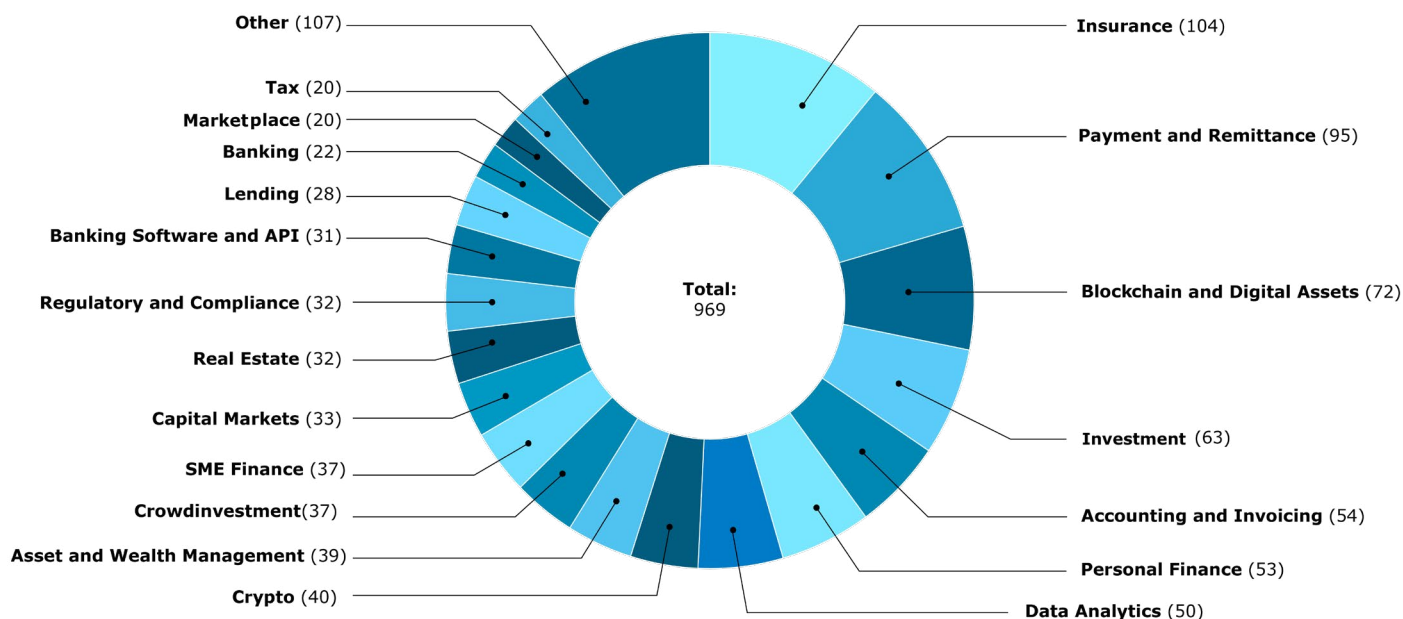


Chart Data as of August 15 2022

Source: [FinTech Consult](#)

Looking at the valuations, the picture looks quite different. The top verticals are banking (€10.7 B), payment & remittance (€8.9 B), and capital markets (€7.5 B).

Valuation of German FinTech Ecosystem (by category) in billion €

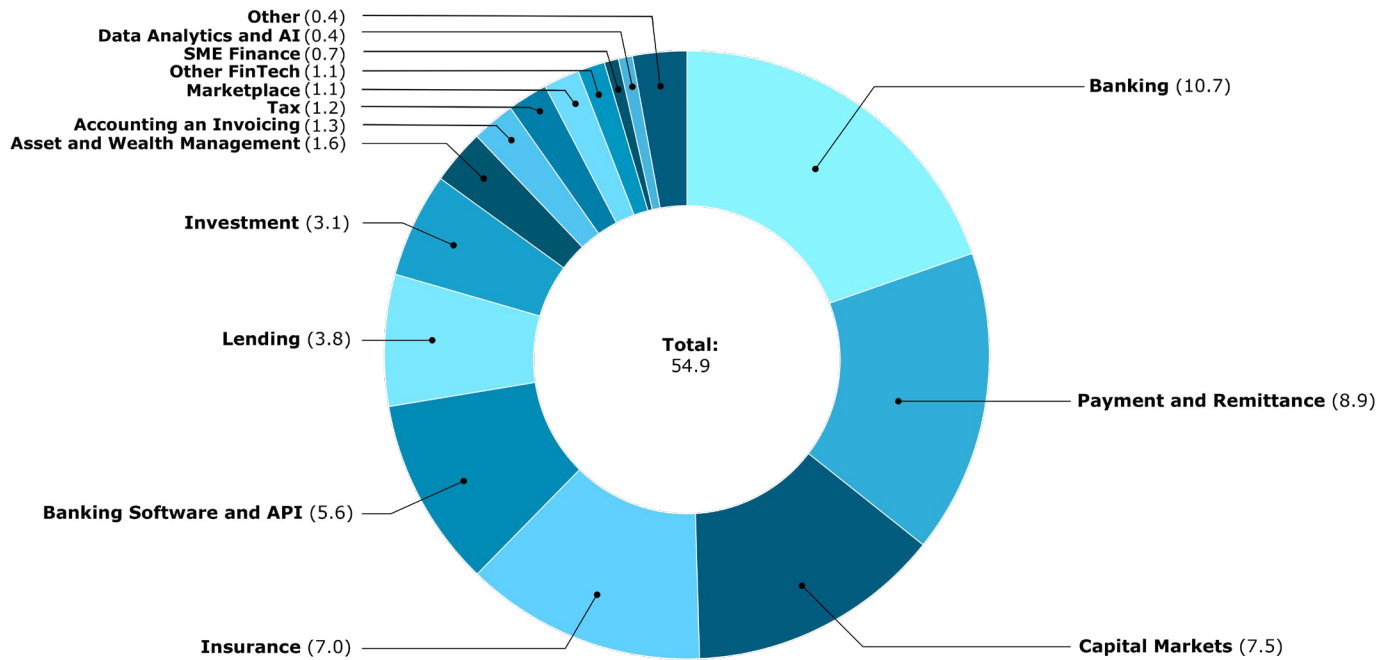


Chart Data as of August 15 2022

Source: [FinTech Consult](#)

6 Recent M&A Deals

As in the previous year, M&A activity remains high. However, the magnitude of historic deals was not reached (e.g., [360T's](#) acquisition by Deutsche Börse Group for €725 M in July 2015, [Concardis'](#) acquisition by private equity investors Advent and Bain Capital for more than €700 M in January 2017, and in June 2018 by Nets, or the acquisition of a majority stake in [heidelpay](#) (now: [Unzer](#)) by KKR at a valuation of almost €930 M in August 2019).



Simplesurance

Founded in 2012

Located in Berlin

Insurance platform

Acquired by Allianz X in September 2022

<http://www.simplesurance-group.com>

Penta

Founded in 2016

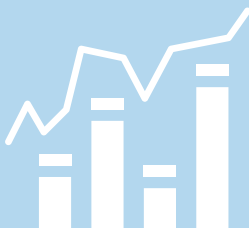
Located in Berlin

Mobile bank for SMEs and start-ups

Pre-acquisition valuation of €300 M

Acquired by French FinTech Qonto in July 2022

<https://getpenta.com>



Kontist

Founded in 2016

Located in Berlin

Banking services for freelancers and self-employed

Acquired by Ageras Group in July 2022

<https://kontist.com>

Orderbird

Founded in 2011

Located in Berlin

POS solutions for restaurants & bars

Fully acquired by Nexi/Nets in May 2022

<https://www.orderbird.com>



Luko Insurance

Founded in 2016. Former name: Coya

Located in Berlin

AI-based InsurTech solution

Acquired by French FinTech Luko in January 2022

<https://de.luko.eu>

Fincompare

Founded in 2016

Located in Berlin

SME financing platform

Acquired by DZ Bank in December 2021

<https://fincompare.de>



WebID Solutions

Founded in 2012

Located in Berlin

Video identification / KYC solution

Majority stake acquired by AnaCap Financial

Partners in September 2021

<https://webid-solutions.de>

Zeitgold

Founded in 2015

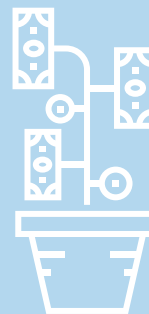
Located in Berlin

AI-based accounting automation

Pre-acquisition valuation of €135 M

Bought by the US start-up Deel in August 2021

<https://www.deel.com>



Stocard

Founded in 2011

Located in Mannheim

Mobile wallet provider

Bought by Klarna for €113 M in July 2021

<https://stocardapp.com>

Crossinx

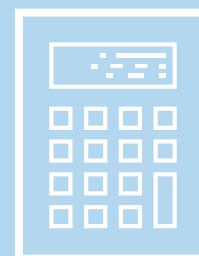
Founded in 2007

Located in Frankfurt am Main

Cloud-based services for the financial supply chain

Acquired for €100+ M by the Unifiedpost Group in May 2021

<https://www.crossinx.com/en>



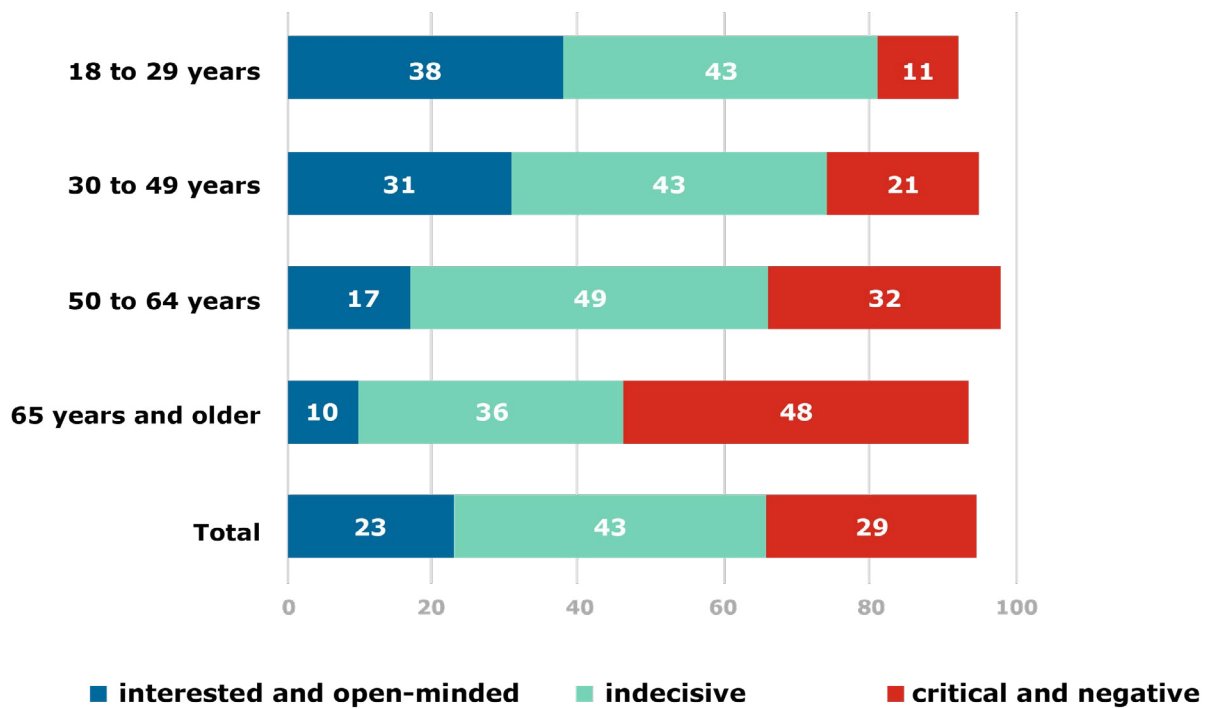
7 German Consumer Behavior

7.1 Mobile Banking is (Mainly) a Topic for Younger People

In a recent survey by [bitkom](https://www.bitkom.de), 1,003 Germans were asked about their positions towards mobile banks ("Neobanken"). 9% already had an account with a mobile bank, and another 25% could imagine opening an account there. However, 60% state that they would not or rather not become mobile bank customers. When asked about the advantages of mobile banks, 43% mentioned the simple and fast account opening process, 38% low costs, and 37% an excellent overview of their financial situation. On the other hand, 45% cited the lack of personal advice as the most critical disadvantage.

The age groups of 18-29 years (38%) and 30-49 years (31%) are much more open to mobile banking than the average population (23%), as shown in the following chart.

What is your view on mobile banks? [%]

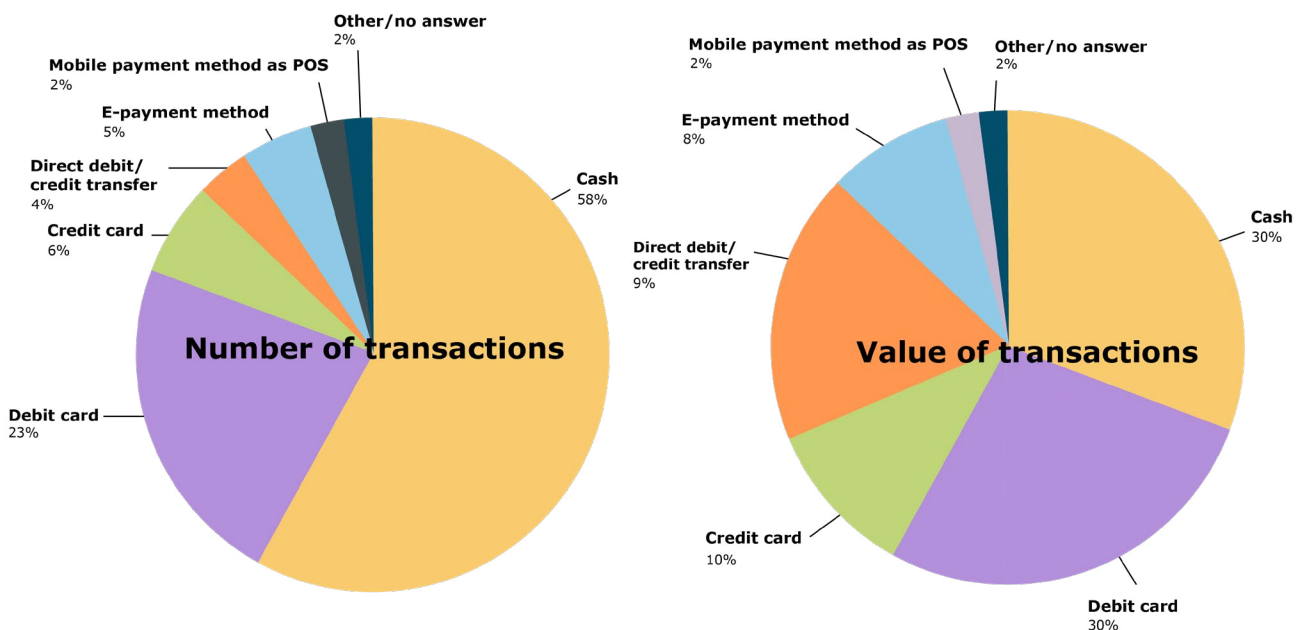


Source: Survey of 1,003 Germans over 18 years, [bitkom](#)

7.2 Cashless Payment is (slowly) on the Rise

The pandemic has accelerated the changing payment behavior. The share of cash payments measured by the number of transactions has declined by 16% since 2017 (by 18% when measured by turnover). Conversely, the transaction share of debit and credit cards grew by 4% and 5%, respectively.

Nevertheless, unlike in many other EU countries, cash is still widely used. Almost all smaller shops in Germany offer cash and card payments, regularly including NFC-based mobile payments. Exceptions remain in more cash-dependent areas.

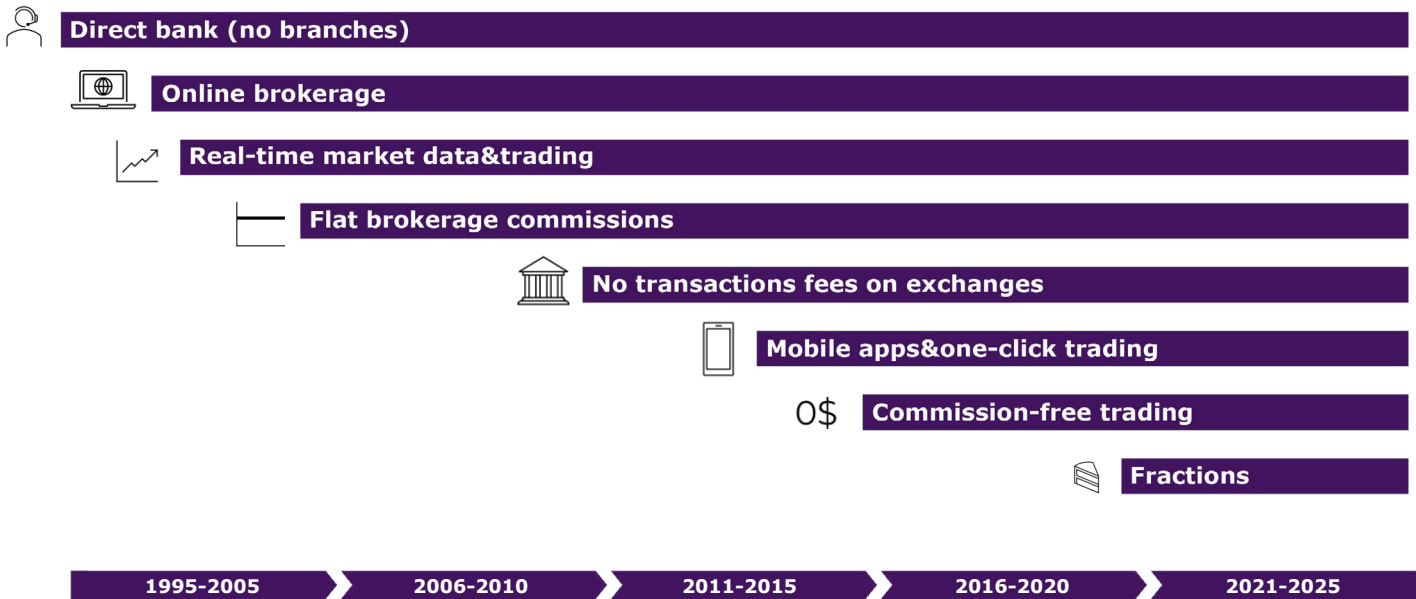


Source: [Bundesbank](#)

7.3 The Boom in Retail Brokerage Continues

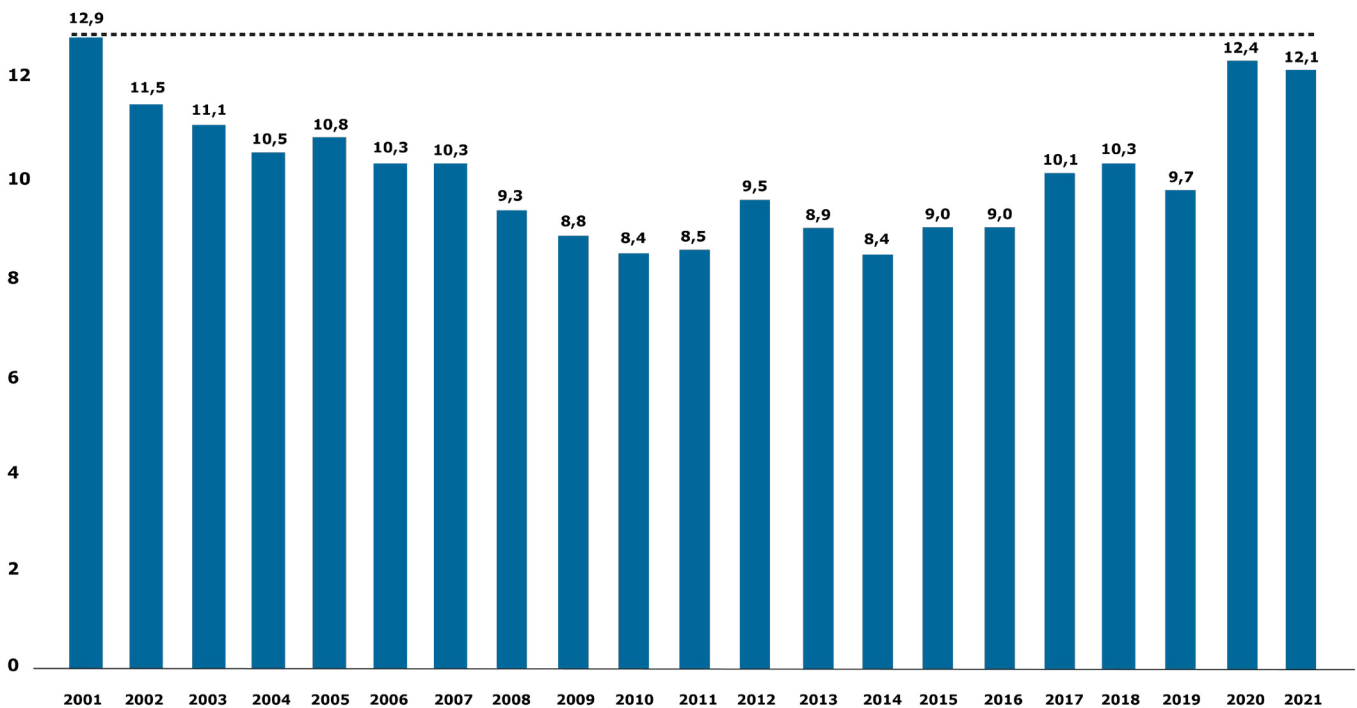
Securities trading by retail investors increased by ~80% in 2020 over all German exchanges.

Major service improvements in retail brokerage



After the initial pandemic boom, the number of shareholders in Germany is almost back to 2000 levels after a twenty-year dip, rising from ~10% to 15%. Compared to developed brokerage markets in Europe (e.g., the UK, Netherlands, and Nordic countries) with an average rate of share investors among the population of 35%,²⁸ the percentage of share investors in Germany remains relatively low.

German investors into shares²⁹ in millions (total population: 83.2 M)



Source: [Deutsches Aktieninstitut e.V.](#)

²⁸ flatexDEGIRO, [URL](#)

²⁹ Shares, Exchange-traded funds (ETFs) on shares, equity funds

There are two main drivers for this positive development in retail brokerage:

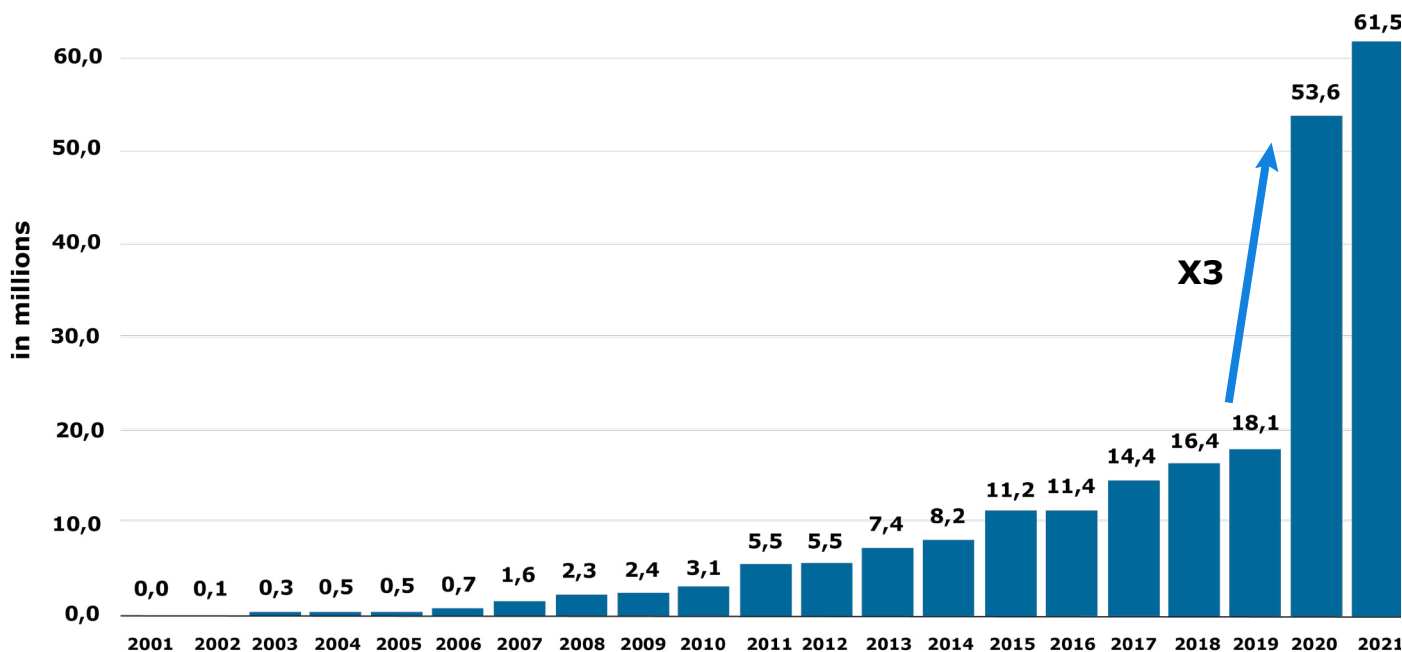
1. Specialized retail exchanges and trading platforms cater better to private investors' needs, e.g., by providing real-time market data and trade execution free of charge.
2. FinTech companies attract new customer groups, e.g., young people between 14-29, with transparent and user-friendly mobile trading apps (one-click trading).

From 2019 to 2021, the number of people between 14 and 29 years investing in shares increased from 0.9 M to 1.5 M: the most substantial percentage increase of all age groups.³⁰

Case Study: Tradegate Exchange

1. Specialized in retail investors:
 - no transaction fees
 - free of charge real-time market data
2. 16,000 securities tradable (stocks, bonds, funds)
3. 62 M trades in 2021, up from 54 M in 2020 and 18 M in 2019 (+86% p.a.)
4. €378 B turnover in 2021, up from €324 B in 2020 and €123 B in 2019 (+75% p.a.)

Tradegate Exchange - Number of Trades



Source: [Tradegate AG](#), own research

Trade Republic, one of the significant local neobrokers, has developed a user-centric and easy-to-use securities trading app, and has rolled it out in Germany, Austria, France, and Spain, as a licensed German investment firm since 2019.

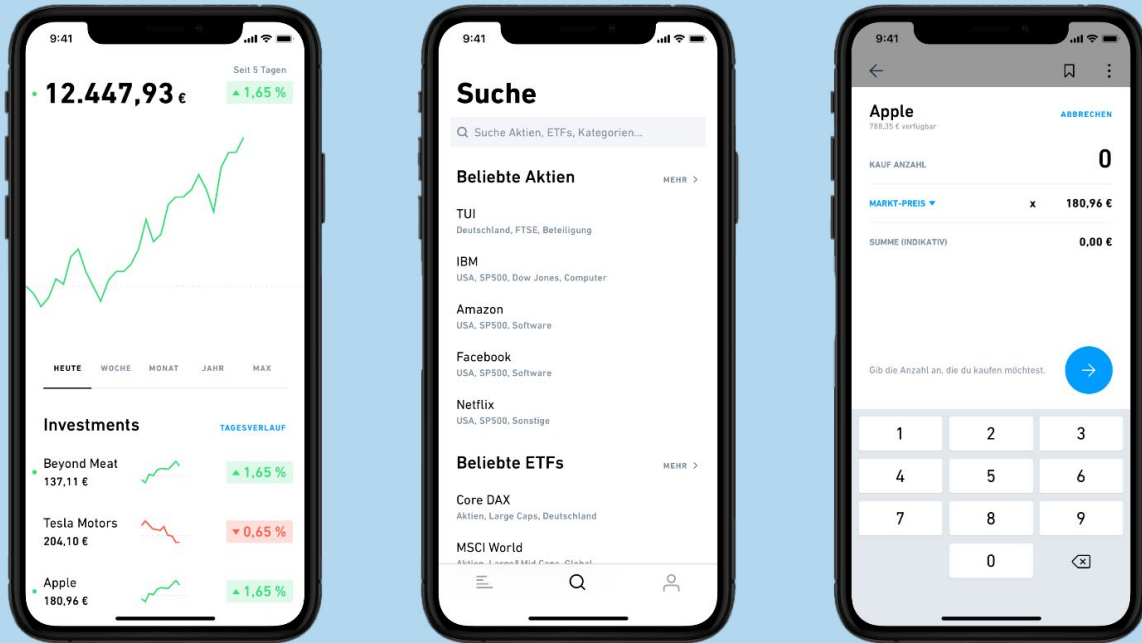
Trade Republic does not charge its clients a brokerage commission, only a third-party fee of €1 per order execution.³¹ Its business model relies on the so-called 'payment-for-order flow' instead: Trade Republic routes its client orders to specific market makers for implementation and is paid by them for this execution. The market makers typically make revenues from matching client buy-and-sell orders and earning the spread.

For more information about the other WealthTech players in the market, please refer to **chapter 3, section 1.2.2.**

³⁰ Deutsches Aktieninstitut e.V., number of shareholders in 2020 and 2021

³¹ In its [customer agreement](#), Trade Republic states in 4.2: In connection with the execution of transactions in financial instruments, Trade Republic may receive payments from the operators of the execution venues or counterparties of the execution transactions (hereinafter "Execution Venues") or from providers of financial instruments (e.g. providers of ETFs; hereinafter "Providers") for the placement of orders at these Execution Venues or counterparties or for the acquisition of certain products of a Provider by Customers of Trade Republic. These payments generally amount to up to EUR 3.00 per qualified Customer order for transactions in financial instruments; in exceptional cases and depending on certain trading turnover sizes, up to EUR 17.60 per Customer order (as of 9/2021).

Case Study: Trade Republic Mobile-first and zero commissions



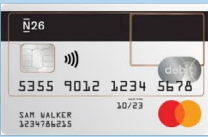
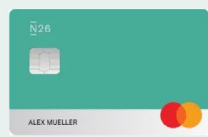

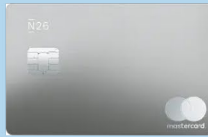
Source: Trade Republic Website (Access Date: 06.12.22)

8 German Market Needs

Many foreign FinTechs entering the German market underestimate its complexity. Private customers tend to be conservative and are not always open to new solutions, even if these solutions offer an improved experience. Companies have long decision-making processes involving many stakeholders and based on consensus. This leads to long sales cycles, which can be frustrating for start-ups.

8.1 Retail Clients

German retail customers have been spoiled with free offers for decades. Many FinTechs follow a freemium approach, as demonstrated by the popular mobile bank N26:

<p>N26 Standard The free digital bank account</p>  <p>Virtual Card</p> <p>€0.00/Month</p> <p>Open Bank Account</p>	<p>POPULAR</p> <p>N26 Smart The bank account with tools for spending and saving</p>  <p>€4.90/Month</p> <p>Open Bank Account</p>	<p>N26 You The bank account for travel and everyday needs</p>  <p>5 Colors available</p> <p>€9.90/Month</p> <p>Open Bank Account</p>	<p>N26 Metal The premium account with perks and a metal card</p>  <p>3 Colors available</p> <p>€16.90/Month</p> <p>Open Bank Account</p>
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Source: [N26](#) (Access Date: 06.12.22)

In mobile banking and payment, the freemium model is usually combined with cashback options. In a competitive market like the German one, managing customer acquisition and retention while maximizing the customers' lifetime value is critical. As a result, the most successful German FinTechs constantly reduce customer acquisition costs and churn while demonstrating a healthy growth trajectory to their investors.

For historical reasons, Germans are very much concerned about data privacy. Proper implementation of EU GDPR is a must. German FinTechs made significant efforts to ensure that their websites and apps are fully compliant. A website should contain an imprint with all legal company details, tax numbers, privacy policy, and terms & conditions.

Considering the regulatory emphasis, an initial legal and regulatory check is recommended before entering the German market.

To maintain clients' trust, data mining technologies or artificial intelligence methods like machine learning should be as transparent and explainable as possible, particularly if it directly impacts clients (e.g., for credit scoring).

More information about the local behavior patterns can be found in **chapter 2, section 1.2**.

8.2 Financial Institutions

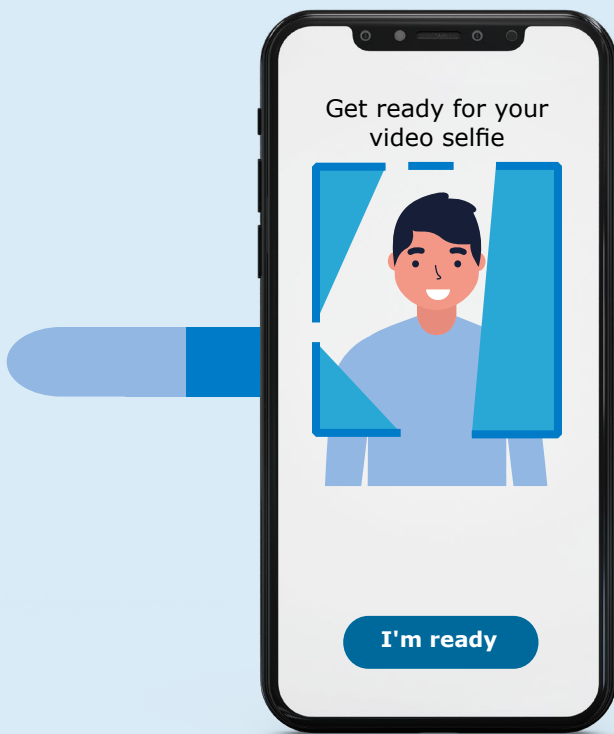
Unlike several years ago, Germany's traditional financial institutions view FinTechs as partners rather than competitors. Most of them partner with a number of FinTech companies and source innovative front-, middle-, and back-office solutions from them. German banks have been the first and most active group of financial institutions in that respect.³²

The first FinTechs to successfully enter into cooperation with banks were providers of onboarding services (e.g., Fino, WebID Solutions, or IDnow), open banking APIs (e.g., Figo), money transfer (e.g., Gini, sofort), fixed deposits (e.g., Weltsparen, Zinspilot, or Savedo) and robo-advisors (e.g., Vaamo, Ginmon, liquid). The FinTech offering is much broader nowadays and covers banking, insurance, capital markets, asset management, and more.

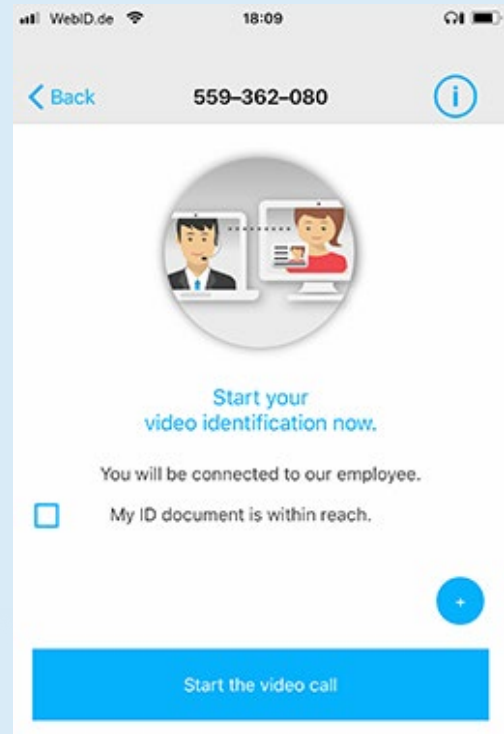
³² Payment and Banking, Infographics: Cooperation between Banks and FinTechs, 2016-2022, [URL](#)

Case Study:

Video identification as part of the onboarding process for financial services in Germany³³



Source: [IDnow](#)



Source: [WebID Solutions](#)

Selling to German financial institutions requires determination and patience.

1. Personal connections are beneficial at the beginning. When the first FinTechs became active in selling to financial institutions, they were a must. In the meantime, many financial institutions have installed Chief Digital Officers, innovation units, or even full-blown incubators, which are potential entry points for a first approach.
2. Sales cycles of 12 months and more are not uncommon. Several departments (e.g., Sales, Client Relations, Finance, IT, Compliance & Legal, or Risk Management) must be convinced. Some may have vested interests and will not readily agree, even to better solutions that undoubtedly add value to the business. Not only once was a seemingly clear victory on the executive floor thwarted by such departments.
3. Even after a favorable decision, it can take another 12-24 months until the FinTech solution is integrated into the IT and ready for operation. FinTech solutions developed for a cloud environment often had to be fitted into a physical rack at a data center, regularly with a significant impact on software development and operations procedures of the providing FinTech company.

To summarize: It looks easy to sell to German financial service providers at first glance. Unfortunately, this impression is wrong. Personal connections matter, e.g., via a German partner.

³³ A more exhaustive list of local video onboarding solutions can be found in chapter 2.

8.3 Other Entities

Many FinTechs in Germany address German small-and-medium-sized enterprises ("SMEs") as the "Mittelstand."

Most SMEs (over 50) are active in invoicing, factoring, and debt collection. The leading player is Billie, with a valuation of \$640 M following its [series C round in October 2021](#). The second largest group (over 40) offers alternative financing options to SMEs, with Creditshelf (a listed company since [July 2018](#)) being the most prominent player. Other relevant topics include trade & supply chain finance and sustainable finance/ESG, the latter with a rapidly growing demand. There is an obvious need for providers that help SMEs to finance their transition towards net-zero and to report their ESG data.

Regardless of the specific vertical, approaching SMEs is challenging. Besides classical marketing channels, including even TV ads, many rely on disseminators, e.g., chambers of commerce, tax advisors, law firms, or IT companies like SAP for a cooperation. Referrals are helpful, but would require time and dedication. Therefore, starting with a partner who is well-connected in the relevant target group of the "Mittelstand" could be beneficial.

Fortunately, the typical German SME is a loyal customer and will generally only switch to another provider under exceptional circumstances.

9 Regulatory Authorities and Licensing

9.1 European Supervisory Authorities

In the EU, micro-prudential supervision, i.e., the oversight of individual financial institutions, consists of different verticals (banking, insurance, capital markets) and layers of authorities (EU and national level). The website of the EU Parliament provides a [comprehensive overview](#) of the European System of Financial Supervision (EFES). The remainder of this section focuses on the German national system.

9.2 German Federal Financial Supervisory Authority (BaFin)

In Germany, since 2002, there has been a single financial supervisory authority that regulates all financial activities, the ["Bundesanstalt für Finanzdienstleistungsaufsicht"](#) ("BaFin") or Federal Financial Supervisory Authority. Different authorities for the supervision of banking, insurance, and the capital market were merged at that time.

"BaFin operates in the public interest. Its primary objective is to ensure the proper functioning, stability, and integrity of the German financial system. Bank customers, insurance policyholders, and investors ought to be able to trust the financial system.

BaFin employees work in Bonn and Frankfurt am Main. They supervise banks, financial services institutions as well as payment and e-money institutions, German branches of foreign credit institutions from the European Economic Area, insurers and pension funds, as well as capital management companies, and domestic funds.

Under its solvency supervision, BaFin helps ensure the ability of banks, financial services institutions, and insurance undertakings to meet their payment obligations. Through its market supervision, BaFin also enforces standards of professional conduct which preserve investors' trust in the financial markets. As part of its investor protection, BaFin also seeks to prevent unauthorized financial business."³⁴

9.3 BaFin's View on FinTech

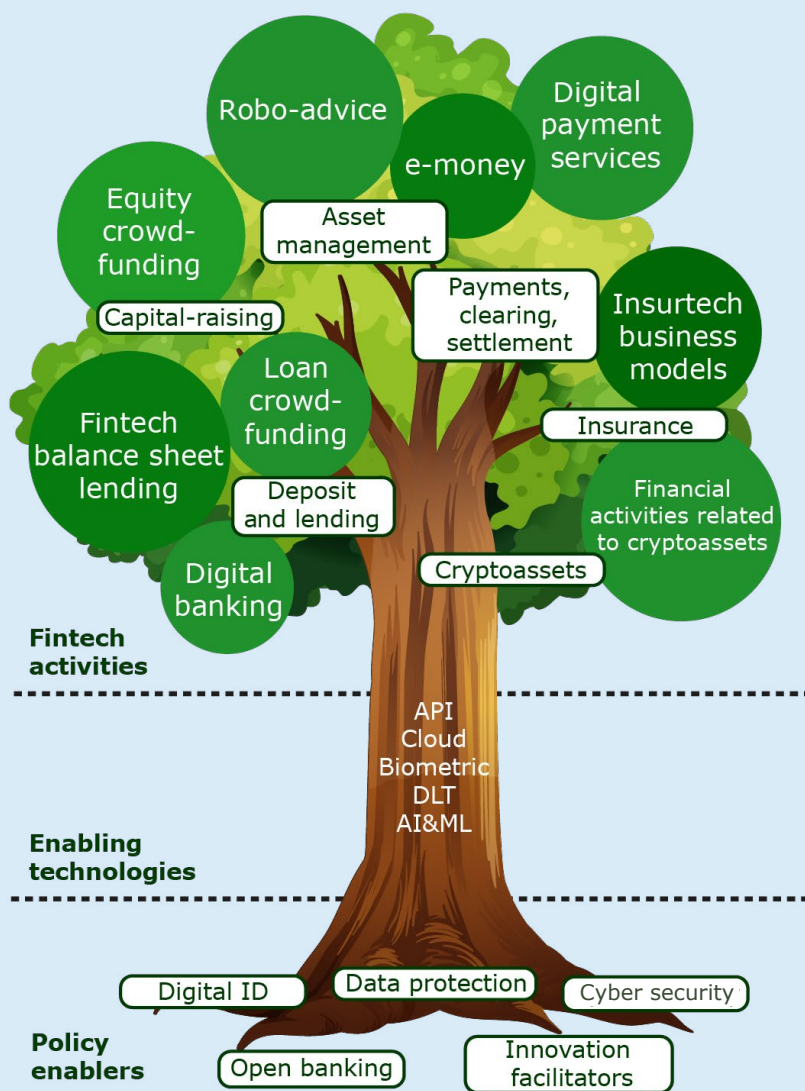
BaFin has always made clear that its principle 'same business, same risks, same rules' also applies to FinTech start-ups. Early on, BaFin rejected³⁵ the idea of a regulatory sandbox³⁶ which became famous among other international regulatory authorities.

To inform FinTechs about potential authorization requirements, BaFin has established a FinTech Information Hub on its [website](#).

BaFin's definition of FinTech follows the "FinTech tree" of the [Financial Stability Institute \(FSI\)](#) at the Bank of International Settlement (BIS) and includes InsurTechs, RegTechs, and SupTechs.

The FinTech Information Hub provides an overview of the most popular FinTech business models and their regulatory and supervisory implications.

Furthermore, it offers a contact form for FinTechs to initiate a dialogue with FinTech experts at BaFin. It should be noted that a conversation as such takes time and might need preparation, especially for novel business models and approaches.



Source: [BIS-FSI](#)

³⁴ BaFin, Functions & History, Last Access Date: 26.09.2022, [URL](#)

³⁵ BaFin, BaFin-Tech: Konferenz zur Digitalisierung in Berlin: Zwischen Wettbewerb, Kooperation und Verbraucherschutz, [URL](#)

³⁶ FCA, Regulatory Sandbox, [URL](#)

9.4 Authorization and Licensing

BaFin provides a basic understanding of the authorization and licensing requirements in Germany with the following words: "Anyone wishing to provide certain banking and financial services in Germany requires authorization by BaFin. With regard to the question of which authorization is required, the determining factors are the planned business model and the legal and actual design of the planned products and services. In principle, a distinction is made between [banking business](#), [investment services](#), [financial services](#), [payment services](#), and [e-money business](#). The question of whether a business model requires authorization and, if so, the type and scope of the authorization are determined on a case-by-case basis. BaFin provides the information regarding market entry on this website to serve as initial, non-binding guidelines." ³⁷

9.5 New Authorization Requirement for Crypto Custody Business

Recently, cryptocurrencies and digital assets have been new focus areas for BaFin.

"The German Act Implementing the Amending Directive on the Fourth EU Anti-Money Laundering Directive ([Federal Law Gazette I of 19 December 2019, p.2602](#)) has introduced crypto custody business into the German Banking Act as a new financial service. Since the entry into force of the Implementing Act on 1 January 2020, companies seeking to provide such services have required authorization from BaFin. For further details, please refer to BaFin's guidance notes." ³⁸

9.6 European Passporting

"Credit institutions, securities trading firms, payment and e-money institutions that are authorized in one country of the European Economic Area (EEA), and leasing and factoring institutions that are subsidiaries of credit institutions may in principle also perform their activities in another EEA member state. Cross-border business may be carried out either by setting up a local branch (freedom of establishment) or by way of the free provision of services (freedom to provide services). The freedom of establishment and freedom to provide services are subsumed under the term 'European passport.'

If one of the aforementioned institutions intends to carry out activities in Germany under the freedom of establishment and/or freedom to provide services, the home supervisor of that institution must be notified of this intention." ³⁹

European passporting allows FinTech start-ups to work without borders, however, it is not applicable for some licenses, as additional licenses and requirements might be needed.

Submitting the notification to the home supervisor

Home supervisor assesses whether the notification is complete and whether the organisational structure is appropriate and financially sound

Assessment by the host supervisor

Host supervisor assesses the application and, if applicable, enters it into the relevant register; informs other competent authorities (e.g., other competent supervisory in the host country)

Informing superordinated European authorities

In the case of some notifications, the ECB or ESMA must be informed either by the home or the host supervisor

Notifying the host supervisor

Notification passed on to the host supervisor together with additionally required information of the home supervisor as well as general information on the institution or its capital adequacy

Sending the "Welcome Letter"

The host supervisor informs the institution of the applicable national laws which must be complied with in addition to the European provisions while exercising the freedom of establishment and freedom to provide services

After sending the "Welcome Letter"

If applicable, institution is supervised in accordance with the national provisions



³⁷ BaFin, Market Entry, [URL](#)

³⁸ BaFin, Guidance notice – guidelines concerning the statutory definition of crypto custody business, [URL](#)

³⁹ BaFin, European Passport, [URL](#)

9.7 Regulatory Umbrella

For some business models, cooperation with already licensed entities can be an alternative to the sometimes lengthy and costly process of applying for authorization with BaFin.

For the banking business, several financial institutions, including FinTechs, offer such services under the "Banking-as-a-service" brand, typically API-based. Here are some of the service providers in Germany:

Banking-as-a-Service

Solaris

FinTech, founded in 2016, based in Berlin
<https://www.solarisgroup.com/en/>

Raisin Bank

Former MHB-Bank, founded in 1973 and based in Frankfurt am Main, acquired by Raisin in 2019
<https://www.raisin.bank/en/>

Sutor Bank

Founded in 1921, based in Hamburg
<https://www.sutorbank.de/banking-plattform>

SWK Bank

Founded in 1959, based in Bingen
<https://www.swkbank.de/en/banking-as-a-service>

Other BaaS examples include companies with e-money or PSD2 compliant licenses offering payment-based white-label services.

In addition, "Investment-as-a-Service" providers allow their business partners to provide investment services for their clients via their APIs. Here are some of the service providers in Germany:

Investment-as-a-Service

Upvest

FinTech, founded in 2017, based in Berlin
Focus on retail investors
Financial brokerage, proprietary trading, savings, security & crypto custody
<https://upvest.co/>

AHP Capital Management

Founded in 2011, based in Frankfurt am Main
Focus on institutional clients and professional investors
Investment funds and similar financial products
<https://www.ahp-cm.com>

For more examples of embedded finance, please see **chapter 3**.

10 Financial Regulations in Germany

10.1 Overview

The German regulatory system is complex and consists of:

1. EU Regulations
2. EU Directives, transposed into German law⁴⁰
3. German national regulations and acts

10.2 FinTech Relevant German Legislation

A central piece of legislation is the [Banking Act](#) ("Kreditwesengesetz" or KWG).⁴¹ Among many other issues, it defines what credit or financial services institutions are and when authorization is required. For the insurance business, the [Insurance Supervision Act](#) ("Versicherungsaufsichtsgesetz" or VAG),⁴² and for capital markets, the [Securities Trading Act](#) ("Wertpapierhandelsgesetz" or WpHG)⁴³ play a similar role.

Furthermore, the [Money Laundering Act](#) ("Geldwäschegesetz" or GwG)⁴⁴ is highly relevant for all financial activities.

On BaFin's website, there is a [comprehensive list of German acts](#) that form the legal basis of its financial supervision.

10.3 Guidance from the BaFin

BaFin provides guidance on applicable EU and national legislation on different business verticals relevant to financial technology. Please find the links in the following table:

Business Vertical	FinTech-Specific Topics	
Banking	General legislation	Digital Banking
Payments	General legislation	Innovative Payment Methods
Insurance & Pension Savings	General legislation	InsurTech
Capital Markets & Asset Management	General legislation General legislation	Robo Advisor/Automated Trading, Automated Portfolio Management
Blockchain & Digital Assets		DLT, Blockchain and Crypto Assets
Other Financial Services	General legislation	Open Finance

There are also several excellent articles on banking regulation in Germany from leading law firms.^{45, 46}

40 Germany is often said to 'gold-plate' some EU Directives when transposing them into Germany law, i.e., adding requirements or guidelines that go beyond the original directive. Please check carefully how EU Directives are implemented in Germany, as this might differ from other EU countries.

41 Official version in [German language](#); [English translation](#) by Bundesbank

42 Official version in [German language](#); [English translation](#)

43 Official version in [German language](#); [English translation](#) by BaFin

44 Official version in [German language](#); [English translation](#)

45 Sven H Schneider and Jan L Steffen, The Banking Regulation Review: Germany. In: The Banking Regulation Review - 13th Edition, [URL](#)

46 Jens Kunz and Klaudyna Lichnowska, Banking Laws and Regulation 2022 | Germany. In: Global Legal Insights, [URL](#)

10.4 Exceptions from Authorization Requirement in Investment Brokerage and Investment Advice

The German Banking Act contains a special sector exemption for companies that limit themselves to certain types of investment brokerage and advice and do not engage in any other financial services or banking business beyond this.⁴⁷

This exception can be relevant for certain types of WealthTech business models.

10.5 Targeting German Clients

BaFin constantly monitors whether foreign entities actively approach German clients to offer financial services without proper authorization. It might already consider a German-language website as an indication of actively targeting German clients.

BaFin notes, "Pursuant to (..) the KWG, anyone wishing to conduct banking business or to provide financial services in Germany commercially or on a scale that requires a commercially organized business undertaking requires a written license. (BaFin) assumes that banking business is conducted or financial services are provided in Germany not only if the provider of the service has its registered office or ordinary residence in Germany but also if the provider of the service has its registered office or ordinary residence outside of Germany and targets the German market in order to offer banking products or financial services repeatedly and on a commercial basis to companies and/or persons having their registered office or ordinary residence in Germany.

Providers from non-EEA states that wish to market their banking and financial services products specifically in Germany must therefore establish a subsidiary (..) or a branch (..) in Germany in order to obtain the required license. (..)

*Companies from EEA states may conduct business requiring a license not only by establishing a branch (..) but also on a cross-border basis - without having a presence in Germany - (..), subject to the requirements of (..) the KWG (so-called notification procedure/EU Passport)."*⁴⁸

*Furthermore, BaFin warns that "unauthorized business is a criminal offense."*⁴⁹

⁴⁷ BaFin, Merkblatt zur Bereichsausnahme für die Vermittlung von Investmentvermögen und Vermögensanlagen, [URL](#) (only in German)

⁴⁸ BaFin, Explanation of administrative practice relating to section 32 (1) sentence 1 of the KWG, [URL](#)

⁴⁹ BaFin, Enforcement relating to unauthorized business, [URL](#)

"Germany as Europe's largest economy has brought-up a vibrant FinTech ecosystem with hundreds of financial services start-ups in Berlin and all other key German cities like Frankfurt, Hamburg, Munich, Cologne etc.

Yet, the deterioration of the current macroeconomic environment also affects German FinTechs strongly. Access to funding has become way more difficult, valuations are declining and consolidation accelerates. At the same time, Germany's FinTech ecosystem still comes with a high development potential in B2C and also in the emerging B2B FinTech space. While traditional banks enjoy a leap of faith they are very busy to manage their internal IT modernization.

At the same time consumers and businesses are more and more open to adopt FinTech solutions. FinTechs will continue to gain relevance and will increasingly shape the financial ecosystem due to their technological advantage. They enable embedded Financial Services significantly better and way more convenient compared to incumbents."



Jochen Siegert

**Co-Founder, paymentandbanking.com &
Digital Banking Senior Executive**

Chapter 2:

The German Market Opportunity for Dutch FinTechs

About this Chapter

The **first chapter** of this study outlined the main characteristics of the German FinTech market. With those findings in mind, the second chapter introduces and analyzes the specifics of the German market from a Dutch FinTech perspective. Those findings aim to create an awareness of potential challenges when entering the German FinTech market and the opportunities. The substantial aspect of funding opportunities and challenges in the German market is discussed separately in **chapter 3**.

Chapter Outlook

Looking at German business culture, the behavior of German consumers, infrastructure, and regulatory- and tax-related factors, this chapter will demonstrate that Germany provides a less FinTech- and innovation-friendly environment than the Netherlands but, overall, still healthy conditions. This chapter also outlines different FinTech hubs in Germany in more detail along with potential strategic partners. Furthermore, due to the high relevance of partnerships between FinTechs and banks in the German market, the national banking sector is described and analyzed regarding its potential for Dutch FinTechs in entering the German market. Finally, the chapter covers the opportunities arising from German SMEs and closes with two detailed showcases on blockchain & digital assets and cybersecurity & fraud.

1 German FinTech Market Considerations

With 83 M inhabitants and a robust, diverse economy, the attraction of the German FinTech market for foreign players is apparent. Being neighboring states, differences between the Netherlands and Germany are supposedly minor. However, depending on the underlying business model, those little differences can be crucial for success. Mistakes are to be avoided in the rather unforgiving German market. This section will highlight factors to consider when planning to enter the German FinTech market.

1.1 Business Culture

1.1.1 Values

Regarding German business culture, there are considerable differences between the 3.5 M enterprises registered in Germany by 2021.⁵⁰ Whereas modern business values are generally more likely to be found in younger, innovative start-up and FinTech companies, German corporations and SMEs are typically more reluctant to change and consequently driven by a rather traditional business approach.

Therefore, when entering the German market, Dutch FinTechs are unlikely to struggle with their German counterparts; however, bearing in mind the cultural traits of corporations and SMEs is highly encouraged. Even though these traits are not universal, understanding specific patterns will help Dutch FinTechs when arriving in Germany.

50 Statistisches Bundesamt, 2020, [URL](#)

Hierarchy & Decision Making

Generally, Dutch FinTechs can expect a higher degree of hierarchy from German businesses and organizations. Larger companies typically consist of several hierarchical levels. Compared to the Netherlands, where CEOs are relatively approachable, hierarchical levels in German organizations put more distance between those on top and at the bottom. This applies to communication and decision-making, which often follows a top-down logic. Hierarchy also leads to a particular protocol, such as greeting a manager first when entering a meeting or the manager speaking first. However, the fact that German business culture respects authority should not be mistaken for a form of obedience. Challenging a superior is acceptable but should be based on a better argument. Dutch FinTechs planning to establish business relations with German organizations should consequently make sure to address those representatives with decision-making authority, match hierarchy levels accordingly, and prepare for longer decision-making cycles.

Risk Aversion

Whether it is about potential investments, using new technologies, or making a career change, the associated risks tend to outweigh the opportunities when Germans make decisions. This mindset can also be found in German business culture. For example, 63% of German businesses consider themselves risk-averse.⁵¹

Consequently, risk management has a high priority. This is particularly true for the financial sector. With comprehensive risk management requirements in place, any negligence can put one of the essential assets of financial institutions at risk – their licenses. A further crucial asset that is protected by risk aversion is reputation since the trust of German consumers can easily be damaged (see **section 1.2.1**). Consequently, German business culture is more formal and procedural than the Dutch.⁵² When establishing business relations with German organizations, being able to provide extensive information on risks and their mitigation will likely pay off.

⁵¹ CF-Fachportal, [URL](#)

⁵² Culture Matters, [URL](#)

⁵³ GIZ

⁵⁴ Expatica, 2022, [URL](#)

⁵⁵ Statista, 2020, [URL](#)

Professionalism

Professionalism is one of the values appreciated most in German business culture since it sums up several traits, such as goal and task orientation.⁵³ Usually, a clear plan is in place that determines how to reach a goal. It is executed thoroughly and with attention to detail since Germans strive for perfection regarding their work results. This includes gaining expertise and planning for a more extended period. Compared to the Netherlands, doing business in Germany is less pragmatic and flexible but follows a more static order of procedures, structures, systems, and methodologies. With that in mind, Dutch FinTechs will know what to expect from potential German partners and what is expected from them when making a professional appearance. Professionalism is also determined by certain etiquette.

1.1.2 Communication and Etiquette

Regarding communication forms, Dutch and German businesses have much in common, one example being direct and open communication. Feedback is usually given straightforwardly without sugar-coating critical parts.⁵⁴ A difference to the Netherlands is the business language. Whereas the English skills of Dutch people are among the most advanced in Europe, English does not come as natural to many Germans. A lot of German start-ups have established English as their corporate language. However, larger corporations and SMEs usually communicate in German, and communicating in English with a foreign party might come unnatural to individuals, resulting in a certain reluctance regarding communicating and decision-making (e.g., in contract negotiations). As for communication channels, the Covid-19 pandemic led to a massive increase in the use of digital tools, such as video conferences and chat software. In 2022, 3 out of 4 German businesses claim to use video conferences regularly for internal and external communication.⁵⁵

As for etiquette, German business culture is still determined by a comparably high degree of formalism. It is common practice to approach another person with the formal “you” (German: “siezen”) unless the informal “you” (German: “duzen”) was explicitly offered or is part of the corporate culture. The latter can be observed increasingly, even in the traditional financial sector, but is still more the exception than the rule.

When it comes to dress codes, German businesses are more open nowadays. Even though suits and ties are still common, “business casual” is widely accepted. Jeans and sneakers can also be worn as a statement, demonstrating a modern and open mindset. A casual style is usually accepted when meeting with German organizations, especially as a FinTech company. Another aspect of etiquette – likely to be associated with German culture the most – is punctuality. With punctuality also being highly valued in Dutch culture, being on time, not wasting other people’s time, and planning meetings ahead will not require significant effort from Dutch FinTechs.

1.1.3 New Work

“New work” is emerging in Germany with digitalization, globalization, changing expectations of employees, and the Covid-19 pandemic being strong drivers for a new working culture. The factors mentioned so far are primarily relevant for Dutch FinTechs when establishing and maintaining business relations with German organizations. However, the state of “new work” in Germany also addresses the implications for Dutch FinTechs when opening offices in Germany and having to transfer or establish their own business culture during this process.

Central aspects of new work are freedom and flexibility, including work-life balance. According to the OECD, the Netherlands is among the countries with the lowest share of employees working more than 50 hours per week on average (0.4%). In Germany, this share is significantly higher (3.9%). In the Netherlands and Germany, employees devote a similar amount of time to leisure and personal well-being (15.4 and 15.6 h per day, respectively).⁵⁶ All in all, the Netherlands is slightly more advanced in terms of work-life balance, indicating little to no challenges when starting a business in Germany. Lower weekly working hours can even be a competitive advantage to attract talent, especially in the start-up scene. As for working times in both countries, around 50% of employees claim to have full or partial flexibility regarding starting and ending their work shifts.⁵⁷

Remote work is common in the Netherlands as well as in Germany. Both countries are currently drafting laws to make remote work a legal right. However, as opposed to the Netherlands, remote work is a new trend for Germans that figuratively happened overnight with the Covid-19 outbreak forcing businesses to allow working from home.⁵⁸ This recent shift in attitude means remote work is likely to still run less smoothly in German corporations and SMEs.

Another aspect of new work is the use of agile methods, changing the approach to uncertainty, giving more freedom and power to individuals, and adapting the working environment to boost creativity. In that sense, the Netherlands is among the early adopters within Europe. Already several years ago, news on Dutch corporations tackling agile transformation emerged, even in presumably traditional sectors.⁵⁹ When it comes to Germany, agile concepts are known but overall, rarely applied. Even though companies are experimenting with single elements or formats, Germany lags in agile adoption.⁶⁰ It is apparent that agile methods are clashing with Germany’s hierarchical top-down business culture that was described earlier. Agile methods are a lot more common among German start-ups and FinTechs; however, Dutch FinTechs operating in Germany need to account for a more prolonged phase of familiarization when applying agile methods.

⁵⁶ OECD, 2022, [URL](#)

⁵⁷ Eurostat, 2019, [URL](#)

⁵⁸ Sifted, 2021, [URL](#)

⁵⁹ E.g., ING in 2015

⁶⁰ KPMG, 2019, [URL](#)

1.2 Addressing German Consumers

German consumers have a reputation for having a higher contentment barrier. And this is particularly true for financial services and foreign companies trying to establish a new brand. Paying high importance to the traits of German consumers is, therefore, one of

the main success factors when Dutch FinTechs plan to conquer the German FinTech Market. Below, some of those traits are introduced in more detail.

1.2.1 Trust and Loyalty

Germans are risk-averse and usually try to avoid uncertainty. Consequently, purchasing decisions are often well-researched and influenced by tests, consumer reviews, and word-of-mouth. This is particularly valid when researching new financial products or services. Consumers' decisions might also be impacted by a company's cooperation partner or the regulatory setup. Dutch FinTechs entering the German market are therefore advised to pay close attention to building trust with potential clients. In this context, tests and certifications performed by established and highly trusted institutions can pay off (e.g., "[Stiftung Finanztest](#)"). This also applies to being listed on digital comparison platforms such as [Check24](#) or [Verivox](#). Furthermore, the first impression is crucial. Products, services, and processes (e.g., customer care) must match a certain quality standard.

Otherwise, the brand's reputation might be compromised beyond repair, already at an early stage. FinTechs can benefit from trusted and established brands when choosing partners, especially when those partners possess local licenses. A payments license issued by the German regulator BaFin or a German IBAN can, for instance, be strong assets for building trust. The good news is that higher efforts for increasing the brand's trust are well-spent since businesses are, in turn, likely to be rewarded with loyalty. When Germans like a certain brand, 2 out of 3 are prone to be loyal to that brand.⁶¹ However, this also means that new market participants need a strong value proposition to convince German consumers to try their products and services.

1.2.2 Data Protection and Security

In the past century, Germans experienced two dictatorships (the Third Reich and the German Democratic Republic) that massively violated the privacy of their citizens. This resulted in a deeply rooted and enduring need for data protection which is particularly apparent when it comes to the digital world. 68% of Germans believe that their data is rather unsafe or completely unsafe on the internet.⁶² Despite GDPR and improved data autonomy, 84% of Germans are under the impression of having no control, or limited control, over their data on the internet. At the same time, 80% state that protecting personal data is very important.⁶³ Consequently, Germans are somewhat hesitant when creating user accounts, trying new services, or signing up for newsletters.

Data protection and security are closely linked to the findings on establishing trust. When entering the German market, the concerns of Germans regarding the protection of their personal data need to be addressed. It is advised to be transparent about how data is processed and stored (ideally within Germany or the EU) and to be prepared to answer customer inquiries with appropriate detail. Certifications offered by independent organizations such as TÜV or DEKRA to confirm compliance with legal requirements can help address consumer concerns.⁶⁴

61 Statista, 2020, [URL](#)

62 Statista, 2021, [URL](#)

63 NetID, 2021, [URL](#)

64 TÜV and Dekra are independent and highly trusted organizations that test, inspect and certify various kinds of systems and products

1.2.3 Digital Savviness

The importance of data protection and security is also impacting the digital savviness of German consumers. As mentioned in chapter 1 of the study, Germans prefer using cash since it does not leave a digital trace. There is a clear trend toward digital payments due to the Covid-19 pandemic; however, in 2021, 58% of transactions (by count) were still made using cash.⁶⁵ Cash-only merchants can still be found regularly, even in bigger cities such as Berlin.

The skepticism of Germans towards digital offers is also reflected in online and mobile banking usage. In 2021, only 56% of Germans used it actively,⁶⁶ compared to 78% in the Netherlands. Using online services to purchase shares or funds (7%), insurance (5%), or apply for loans (2%) is still very uncommon despite strong growth rates in recent years. The lower digital savviness of Germans also shows in mobile payment usage, cryptocurrency ownership, mobile phone usage, and e-commerce transactions. However, when interpreting these statistics, Germany's aging population needs to be kept in mind. 30% of Germans are above 60 years of age,⁶⁷ bringing down the numbers for digital savviness significantly. Implications for Dutch FinTechs are not to overestimate the size-related market potential despite Germany's population of 83 M inhabitants and to develop a thorough understanding of user needs within different target groups.

1.2.4 Pricing

Having identified a user need is a good starting point for a FinTech, but it does not guarantee that users are willing to pay for it. One example is current accounts. For over two decades, consumers have had plenty of options when being in need of a free-of-charge current account with a payment card, and yet most primary accounts are still held with banks charging subscription fees. However, users' willingness to pay is likely not deriving from the account itself but from ensuring the possibility of entering a branch and speaking to a bank clerk in person. Therefore, understanding what deeper-rooted needs users are willing to pay for is a crucial success factor in the German market. Following, for instance, the revolution of the music industry, Germans are increasingly used to freemium models.

In the financial services industry, however, freemium models are still rare, with consumers being used to a free-of-charge culture. Freemium models are almost exclusively applied by challenger banks, where consumers can typically upgrade their for free standard plan to several charged subscriptions. In return, consumers receive perks, such as personalized cards or metal cards and preferable terms, e.g., lower trading fees, higher interest rates on savings, or free ATM withdrawals. Yet, challenger banks need to prove that a significant number of consumers can be convinced to sign-up for charged plans. As a result, FinTechs operating in the German market mainly generate cash flow from indirect sources, such as partnerships, referrals, kickbacks, or spreads, e.g., interest-based business models.

65 Bundesbank, 2021, [URL](#)

66 Statistisches Bundesamt, 2021, [URL](#)

67 Statistisches Bundesamt, 2021, [URL](#)

1.3 German Market Infrastructure

1.3.1 Access to Talent

Competition for skilled talents remains strong, particularly in tech-related industries. This applies to the Netherlands and Germany. It is, therefore, important to understand the implications for operating and finding talent in Germany. The Netherlands achieves an excellent 6th rank in the INSEAD Global Talent Competitiveness Index,⁶⁸ which measures the country's capability of attracting, enabling, growing, and retaining talents as well as the availability of skills. In nearly all categories, the Netherlands ranks high with no major weaknesses. Germany is ranking 14th overall. Nonetheless, there are a few sub-categories that stand out. The country reaches a strong 5th rank regarding vocational and technical skills. There is room for improvement regarding the workforce having tertiary education and the overall ability to attract talent, which is negatively impacted by a lack of gender equality.

With English usually being the corporate language in FinTechs, proficiency in the English language in a country is another relevant factor for finding talent. Regarding English proficiency,⁶⁹ the Netherlands ranks the highest among 35 European (non-native speaking) countries. Germany ranks 11th, still showing a very high level of English proficiency and offering acceptable conditions. Finding talents with sufficient English skills will, therefore, not be a concern for Dutch FinTechs operating in Germany.

Other factors for finding talent are salary levels and additional benefits. Due to the high mobility within the European labor market – and especially in the (Fin)Tech scene – salaries in start-ups are similar in Germany and the Netherlands. Moreover, it is common practice in both markets to offer stocks as a part of the overall compensation package. However, the overall conditions for businesses and their employees are less favorable in Germany. According to the 2022 “Not Optional” ranking, stock option friendliness in Germany is among the lowest across Europe, mainly due to the limited scope of beneficial rules, increased bureaucracy and high tax rates.⁷⁰

In the Netherlands, stock option friendliness is average.⁷⁰ Regarding incidental wage costs, Germany and the Netherlands are similar as well, with €36,70 per hour and €35,20 per hour, respectively.⁷¹

Salaries have risen quickly in recent years, reflecting the fierce competition for talent, one driver being strong capitalization among start-ups due to an increased number of successful, bigger funding rounds.⁷² 2022 is marking a turning point in that sense. Economic turmoil after the Covid-19 pandemic and Russia's invasion of Ukraine led to a change in the funding climate, resulting in a high number of layoffs within the European FinTech scene (see **chapter 3, section 1.3.4.2** for details).⁷³

Operating in Germany, Dutch FinTechs can expect slightly worse, but overall, still very good conditions to attract and retain talent. Close attention should be paid to regional differences, which can be significant between German cities. Wages in Munich are, for instance, 25% higher than in Berlin.⁷⁴ Generally, FinTech companies will find the best conditions in bigger cities with a high density of educated talents but also investors, incubators, networks, universities, and industry-leading businesses (see **section 2.1**).

68 INSEAD Global Talent Competitiveness Index, 2021, [URL](#)

69 EF Education First, 2021, [URL](#)

70 Not Optional, 2022, [URL](#)

71 Statistisches Bundesamt, 2020, [URL](#)

72 Sifted, 2021, [URL](#)

73 Forbes, 2022, [URL](#)

74 ZEIT, 2022, [URL](#)

1.3.2 Digital Infrastructure

A modern infrastructure is the backbone of successful digitization. Internet coverage is one of the most relevant aspects of Germany's digital infrastructure. A performant infrastructure is needed to enable digital and connected services, ensuring high bandwidth, availability, and stability. According to the European Commission,⁷⁵ Germany performs well with overall broadband coverage. Coverage of fixed networks has reached 96% of households, with rural areas still lagging behind but making significant progress.

Penetration of high-speed broadband (at least 100 Mbps) is high, with an availability of 75% of households. Germany's overall numbers for internet connectivity are among the best in the EU, being only marginally lower than those of the Netherlands. However, Germany is behind when it comes to fiber internet as one of the pillars of tomorrow's digital economy. In 2021, only 15% of households had access to fiber internet, among the lowest in the EU (NL: 52%). As for mobile internet and 5G coverage, Germany is among the EU's top countries, with 87% of populated areas being covered (NL: 97%). Internet prices are slightly higher in Germany than in the Netherlands.

Another important factor for digital business is the availability of digital public services. Despite several initiatives in recent years, Germany is behind most EU member states in that regard. Only 55% of German internet users use e-government services, one of the lowest rates in the EU. The German state has issued electronic IDs to 53 M people, but usage in practice is cumbersome. Also, the availability of forms using pre-filled data is among the lowest in the EU.

As for digital public services for citizens and businesses, Germany is close to the EU average. By 2030, all public services are supposed to be available online. Until then, businesses operating in Germany need to be prepared to handle bureaucracy in an old-fashioned way. Dutch FinTechs entering Germany should bear this in mind. The Netherlands is currently among the most advanced EU countries regarding digital public services.

The digital infrastructure provided by a country's digital economy is another crucial factor. In this regard, Dutch FinTechs need to be aware of a lower degree of digitization and adoption of new technologies compared to their home market. Whether it concerns electronic data sharing, social media, big data, cloud usage, AI, or e-invoices, German enterprises rank in the lower midfield among EU countries. The Netherlands is among the top countries.⁷⁶

In conclusion, Germany's digital infrastructure is likely to be a setback when coming to Germany from the Netherlands. It is therefore recommended to develop a thorough understanding of the crucial infrastructural needs and their strategic and operational impacts on the business model.

⁷⁵ European Commission, 2022, [URL](#)

⁷⁶ Ibid

1.3.3 Payment Infrastructure

Germany's local scheme for card payments is the Girocard, once started as "EC-Karte". Girocard is a debit card based on the EMV standard and operated by the German Banking Industry Committee ("Deutsche Kreditwirtschaft"). With 5.9 B transactions and a total transaction volume of €253 B in 2021, it is by far the most popular payment card in Germany, especially during and after the Covid-19 pandemic. As a result, contactless Girocard payments were boosted to a share of 72% of all Girocard transactions.⁷⁷ Due to comparably low costs for merchants, Girocard has a higher in-store acceptance than foreign card schemes. For a long time, banks gave out a Girocard as the standard card for a current account, leading to around 100 M Girocards being issued. Nearly every German (97%) possesses at least one Girocard.⁷⁸ With its success deriving from competitive costs and the product being developed by institutional members with different interests, Girocard's innovation ability is comparably low. Consequently, functionality is limited. Online payments are not possible, and only a few Girocards can be used in digital Wallets, mainly Girocards issued by savings banks. Additionally, acceptance outside of Germany is very rare. Most Girocards are therefore issued with a Maestro or VPay co-badge to increase acceptance across Europe. Lately, Girocard's market position is increasingly challenged by Visa and Mastercard, promoting their own debit cards and – in the case of Mastercard – ceasing Maestro.

Credit cards never reached the level of Girocard's popularity in Germany. In 2021, 38 M credit cards were issued,⁷⁹ far less than the 100 M Girocards, with one reason being the Germans' general preference for debit cards. In recent years, Mastercard and Visa successfully started positioning their debit cards in the market, with many direct banks and traditional banks having fully or partially switched their default cards accordingly. Among those banks are N26, ING, Comdirect, and DKB, to name a few. Mastercard and Visa transactions are more expensive and consequently less popular among merchants, especially smaller ones such as bakeries, hairdressers, or butchers. However, acceptance is constantly increasing, also due to FinTechs such as SumUp offering solutions for small businesses that can be set up in little time and for low costs. In addition, Mastercard and Visa cards offer more features to

cardholders, such as global acceptance and online shopping, including buyer protection or mobile payment support. Other card schemes, such as Amex are also active in the German market. However, their market share is significantly lower.

Germany is a member of the Single Euro Payments Area. SEPA payments have high importance for Germans. SEPA payments are widely used, also in the e-commerce business. Germans prefer purchases on account ("Rechnungskauf"), and with PayPal and Klarna's Sofort, there are popular payment methods based on SEPA direct debit and SEPA transactions. Also, utility bills and other subscription-based services are usually paid per SEPA transaction or direct debit. In 2021, 7.1 B transactions and 11.7 B direct debits were made in Germany.⁸⁰ Regarding instant payments, SEPA instant is still far from being a standard in Germany. In August 2022, 40% of SEPA-participating BICs supported SEPA instant, which is above average among SEPA countries but still far from being established. Most German banks also support SWIFT for transactions outside of SEPA. However, due to costs usually being high, numbers are insignificant compared to SEPA.

With Paydirekt, German banks started an initiative a few years ago to enable online and P2P payments. The functionality was similar to the successful Dutch product iDEAL. Unlike iDEAL, it never reached a crucial number of participating banks, resulting in the brand's disappearance from the market in 2021. The case of Paydirekt is symbolic of a long list of projects that unsuccessfully tried to establish transaction-based payment schemes. Due to Germany's banking sector consisting of a high number of different players with varying interests, it has so far proven impossible to achieve interoperability on a larger scale.

Another relevant aspect of the German payment landscape is the availability and quality of APIs. Following PSD2, the Berlin Group standard is widely implemented, and the availability of APIs is high, with many Third-Party Providers (TPPs) being connected to them.⁸¹ However, according to market participants, the Berlin Group standard often is not implemented thoroughly in practice, leading to technical issues and the need for clarification. Also, the use of legacy systems has negative impacts on stability and performance.⁸² Adoption of relevant use cases remains comparably low in Germany.

⁷⁷ Girocard, 2021, [URL](#)

⁷⁸ Statista, 2021, [URL](#)

⁷⁹ Kreditkarten.net, 2021, [URL](#)

⁸⁰ Bundesbank, 2021, [URL](#)

⁸¹ Yapily, The 2022 European Open Banking League Table

⁸² IT-Finanzmagazin, 2021, [URL](#)

From a Dutch FinTech perspective, the German infrastructure does not hold too many surprises. International and EU standards created harmonization with minor differences in practical implementation. However, with infrastructure in the financial industry often being based on legacy systems and adoption of digital infrastructure generally being lower than in the Netherlands, the German ecosystem's eligibility for establishing successful digital FinTech businesses is not as high. FinTechs need to be prepared for a serious challenge if their solution requires broader adoption in the banking sector. The high number of institutions combined with different political interests are almost impossible to master.

1.4 Regulatory Climate and Tax Regime

In recent years, FinTech has matured significantly in Germany and the Netherlands. FinTech solutions cover an increasing share of the financial service industry with a user base that has expanded significantly. Consequently, FinTech's relevance for consumer protection and market stability rose, putting it in the spotlight of regulators. In Germany, BaFin recently highlighted that many FinTechs need to increase their fraud prevention measures to ensure they scale with growth rates.⁸³ In that context, N26 is the most prominent example. After growing to more than 8 M customers and having established business in several European countries and the US, Germany's largest neo-bank also had to face a serious number of fraud cases. As a result, N26 was closely supervised by BaFin, having to work on an extensive list of homework while monthly onboarding numbers of new clients were capped. While acknowledging the importance of technology and innovation for a modern and functioning market, BaFin also emphasizes that the age of digital transformation cannot be an age of softening regulation.⁸⁴ Highlighting increasing complexity and fragmentation of value chains in the financial services industry through FinTech and Banking-as-a-Service (BaaS) providers in particular,⁸⁵ it is likely that regulatory balance will move towards stricter and diligent supervision rather than supervision promoting innovation. The Wirecard scandal is a further important driver for this development (see **chapter 3, section 1.3.3** for details).

In contrast, regulation in the Netherlands is traditionally more open towards FinTech. The Dutch InnovationHub was already established in 2016 by the regulators DNB and AFM, regulatory sandboxes are in place, and synergies between FinTechs, financial institutions and DNB are explored via iForum.⁸⁶ The German regulatory climate being less open towards innovation and change also reflects the higher risk-aversion level in German culture that was discussed earlier. Dutch FinTechs should account for a more increased need for information and clarification by German supervisors, resulting in longer and more cumbersome processes. This also applies when acting under the regulatory umbrella of a BaaS provider. To protect one of their most valuable assets, their BaFin licenses, BaaS providers will call for thorough due diligence.

The Netherlands is known for its favorable tax climate for tech companies. The general corporate income tax rate is lower at 25% compared to 29% in Germany, which is the second highest value across Europe.⁸⁷ The standard VAT rate in the Netherlands is 21%, slightly higher than in Germany (19%). Businesses generally look for legal ways to reduce their taxable income and tax burden. In that context, the Netherlands introduced the Dutch Innovation Box several years ago, allowing significant tax reductions for profits made from innovative products and technology.⁸⁸ That is particularly relevant for FinTechs, just like possible income tax reductions for qualified expats in the Netherlands, helping with attracting talent.

83 Wallstreet:Online, 2022, [URL](#)

84 BaFin, 2022, [URL](#)

85 BaFin, 2022, [URL](#)

86 ICLG, 2022, [URL](#)

87 Tax Foundation, 2022, [URL](#)

88 Tax and Customs Administration, 2022, [URL](#)

The German tax regime does not have any comparable rules in place to boost innovation or entrepreneurship. Instead, several programs and grants addressing start-ups exist (see **chapter 3, section, 2.2** for details).

Also, improving conditions for start-ups and FinTechs is on the roadmap of the German Ministry of Finance, with one measure being the simplification of the taxation of employee shares.⁸⁹ It is unclear, though, when and in which form those improvements will be enacted. Generally, German tax regulation is characterized by complexity and extensive rules. As for the status quo, however, numerous ways allow businesses to reduce their taxable corporate income, such as depreciation or creating untaxed reserves. With taxation being more complicated, involving a tax advisor from the beginning can be a huge help when FinTechs come to Germany and want to use those rules in their favor. This is especially true when finding the ideal legal structure, which has implications for ongoing taxation but also a potential exit. That said, the exit strategy should be reflected when establishing the company and choosing a legal form since the impact on the amount of applicable taxes can be enormous.

1.5 Survey Results and Conclusion

With traditional business culture, harder-to-please consumers, a lower degree of digitalization, and less governmental initiative to strengthen innovation, the German FinTech market is behind the Netherlands regarding creating a modern, innovation-friendly economy and society.

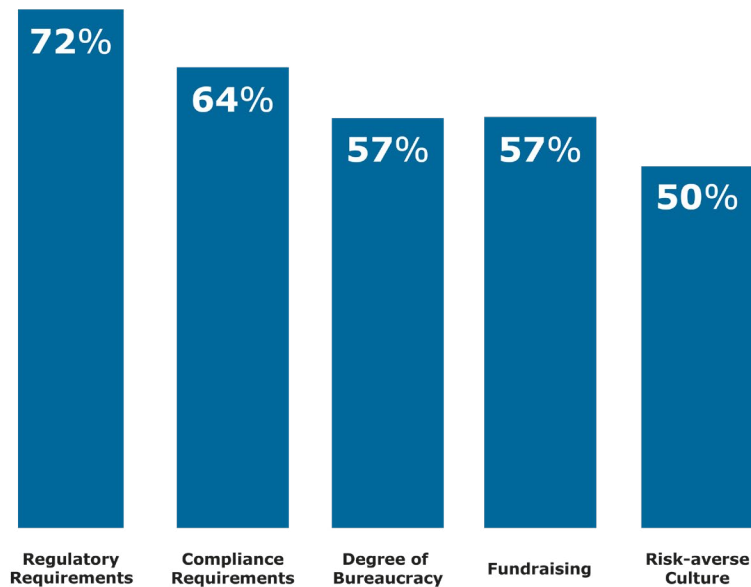
As part of this study, FinTech Consult and Contextual Solutions conducted a survey among FinTechs on their experiences in the German market.⁹⁰ When asked about particular challenges in the German market, the participants of this survey highlighted the requirements on regulation and compliance, the high degree of bureaucracy, the opportunities to raise funds, and the risk-averse cultural.

When asked about the opportunities in the German market, the participants indicated the access to information, the access to talent, the incubator- and accelerator-related potential, the infrastructure, and the start-up support. However, participants feel less strong about those opportunities as the overall low percentages of approval indicate. That said, Germany is still providing favorable conditions for FinTechs, but with the Netherlands being among the most advanced countries in that sense, Dutch FinTechs need to be aware that they are entering a more challenging market.

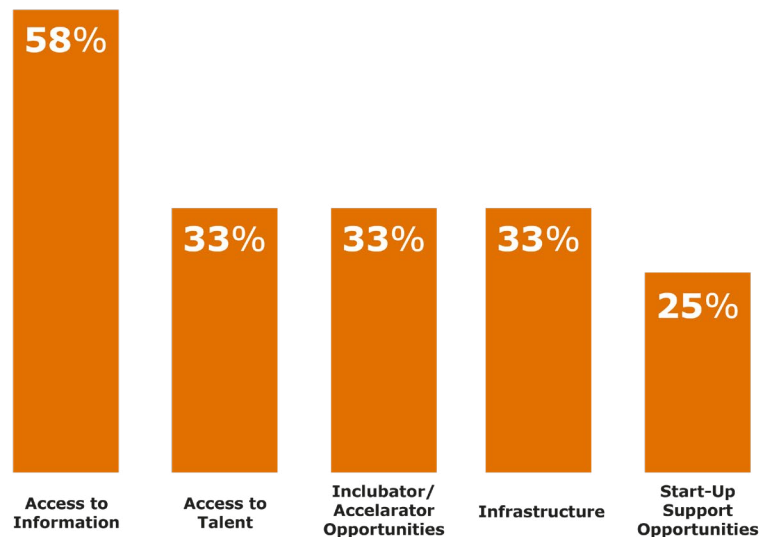
The differences between both markets might be a dealbreaker in some cases, but they are generally manageable. Overall, the German FinTech market offers great potential, but from a Dutch FinTech perspective this potential derives mainly from the market size rather than the market environment. To benefit from the German market potential, it is crucial to pay more attention to the market specifics, analyze their impacts on the business model, and address them within the go-to-market strategy. With this in mind, the next section will outline possible entry points for Dutch FinTechs and strategic partnerships.

⁸⁹ Bundesfinanzministerium, 2022, [URL](#)

⁹⁰ Please see Methodology for details



Top-5 **Challenges** for FinTechs in the German Market ⁹¹



Top-5 **Opportunities** for FinTechs in the German Market ⁹¹

2 German FinTech Market Entry Points

When entering the German FinTech market, the challenges outlined in the previous section must be addressed, likely requiring an increased commitment of resources. Approaching parties with local expertise can help make the right decisions and avoid costly mistakes. Additionally, having a network of partners is crucial to successfully launching FinTech products and services to make the first steps in the market. This section will therefore have a closer look at the local FinTech hubs in the German market, highlighting opportunities for establishing networks and partnerships as one of the main interests of Dutch FinTechs. On the one hand, many Dutch FinTechs intend to increase partnerships but, on the other hand, also struggle with establishing successful partnerships, especially with larger corporations.⁹² Therefore, this section will also provide a closer look at the German banking market and Germany's large sector of SMEs ("Mittelstand").

⁹¹ Own survey conducted by FinTech Consult and Contextual Solutions for this study among FinTech companies operating in Germany.

⁹² FinTech Aera, 2020, [URL](#)

2.1 Local FinTech Hubs

Chapter 1 already provided a brief overview of the major FinTech hubs and the Digital.Hub initiative by the German Federal Ministry of Economic Affairs and Climate Action (see **chapter 1, section 7**). This part will look at the hubs Berlin, Frankfurt, Hamburg, Munich, Cologne, and Stuttgart in more detail by outlining the hubs' different ecosystems, including relevant players, initiatives, and accelerators & incubators.⁹³



Major FinTech Hubs and number of active FinTechs

93 **Note:** Valuation is based on information that was publicly available when creating this study

2.1.1 Berlin

Berlin is a digital melting pot and the home of venture capital in Germany. With its robust network of experts and entrepreneurs, the German capital is a strong competitor with other international start-up cities such as Amsterdam, London, or Barcelona. It has also become an aspiring financial center.

With around 40,000 new companies founded each year, Berlin is the start-up capital of Germany. Year after year, a healthy entrepreneurial culture, tech conferences, start-up contests, incubators, and investors attract talented founders from all over the world. Berlin hosts many of Germany's most relevant and prominent FinTechs, such as N26, mambu, and raisin. The atmosphere in Berlin is young, creative, and innovative, combining history with culture, which makes new ideas welcome to the market. As the city tries to make its mark on the FinTech world, it is providing more and more opportunities to entrepreneurs with innovative and marketable business strategies. The Berlin FinTech scene is well-connected and well-organized thanks to initiatives such as Berlin Partner, focussing not only on FinTech, but also aims to connect start-ups with SMEs, corporations, and science. The public-private partnership supports start-ups with localization, finding talent, funding possibilities, and partnering. In addition, the vivid start-up scene hosts several important and recurring events, such as the Digital Finance Conference, PEX or Startup Night.

Berlin attracts developers from Eastern Europe and elsewhere into an international hub where English is the Lingua franca among start-ups, and costs are noticeably lower than in London or Paris. Also, by German standards, wages and rents in Berlin are still comparably low despite a significant increase in recent years. Top international VCs are active in the Berlin ecosystem and invest in German FinTechs. Receiving 59% of the venture capital invested in Germany, Berlin is the most critical region for tech investments. Berlin remains one of the top European locations for such investment and is just behind London in second place.

Ecosystem Facts and Figures

Focus

#BaaS #Banking #CoreBanking #Crypto #Insurance #Investment #Lending #Payment #Savings #SME_Banking

Facts

- German capital and the largest German city
- Largest number of FinTechs (304 active FinTechs in the Berlin region)
- FinTech roots in e-commerce payments
- Mainly B2C FinTechs

Initiatives

- Berlin Finance Initiative
- Berlin Partner
- GTAI

Accelerators & Incubators

- Antler
- Axel Springer Plug and Play
- Berlin Startup Academy
- Berlin Startup School
- Entrepreneur First
- Founder Institute Berlin
- German Accelerator
- GermanTech
- Hub:raum
- HWR Startup Incubator Berlin

- Seven Accelerator
- Startup Autobahn
- Techstars Berlin
- Reaktor.Berlin
- Rocket Internet

Top FinTechs (valuation)

- N26 (€8.0 B)
- mambu (€4.9 B)
- wefox (€4.5 B)
- Solaris (€1.6 B)
- smava (€1.1 B)
- SellerX (€1.0 B)
- raisin (€895 M)

Listed FinTechs (market cap)

- Hypoport (€1.7 B)

Top-3 FinTech categories:

- Payment & Remittance (33)
- Insurance (26)
- Blockchain & Digital Assets (24)

2.1.2 Frankfurt am Main

The Frankfurt region (Frankfurt Rhein-Main) is one of the most important economic and research centers in Germany and across Europe. Frankfurt am Main and its neighboring city Darmstadt, two great university cities, have joined forces in the fields of finance and cybersecurity to deliver marketable solutions for the digitalization of Germany.

Frankfurt is a leading international financial center. Many of Germany's largest and most important banks and financial institutions' headquarters are in Frankfurt, among them Deutsche Bank, DZ Bank, KfW, and Commerzbank. Furthermore, it hosts many international banks' offices, such as Bank of America, Bank of China, Morgan Stanley, and many more. Headquarters of the European Central Bank, the German Financial Regulatory Authority BaFin, and the German Stock Exchange (Deutsche Börse) underline Frankfurt's position as a financial center. The city also features a high concentration of outstanding universities, such as Goethe University and Frankfurt School of Finance. As a FinTech hub, it builds upon these locally founded strengths. It unites players from the financial sector and the entrepreneurial scene, who work together on new security products and infrastructures for the financial market. Innovative entrepreneurial ideas are developed into market-ready products in the environment of scientific institutions and in partnership with businesses. In this context, Frankfurt Main Finance and Tech Quartier play an important role, representing de:hub. Whereas Tech Quartier has a broader start-up focus, Frankfurt Main Finance focuses on the financial industry specifically. It is also responsible for the SDG FinTech Initiative that promotes sustainability and responsible behavior in the financial industry.

Frankfurt Rhein-Main also hosts Germany's Cybersecurity hub (CRISP) and the largest Internet node worldwide in terms of traffic (DE-CIX). Frankfurt's data centers are not only home to capital markets and financial institutions but also many FinTechs. Open Banking and RegTech are core in Frankfurt, driven by rich process & infrastructure expertise locally as well as the presence of several German & EU regulatory authorities. This is also reflected in the local cost level. Wages, costs of living, and rental prices are among the highest in Germany.

Ecosystem Facts and Figures

Focus

#AI #Banking #Crypto #Data #FX #Insurance #Investment #Payment #Trading

Facts

- Germany's leading financial center
- Home of ECB, EIOPA, Bundesbank, BaFin (German Financial Regulatory Authority), and 200+ banks
- 2nd largest number of FinTechs (183 active FinTechs in the Frankfurt region)
- Mainly B2B FinTechs

Initiatives

- Frankfurt Main Finance
- Tech Quartier

Accelerators & Incubators

- Accelerator Frankfurt
- Finlab
- Neosfer
- Pando Ventures
- Plug and Play Frankfurt
- Unibator

Top FinTechs (valuation)

- 360 T
- ConCardis
- Clark (€1.0 B)
- Arabesque S-Ray/ESG Book (€0.2 B)
- crossinx (€0.1 B)

Listed FinTechs (market cap)

- flatexDEGIRO (€1.3 B)
- creditshelf (€0.1 B)

Top-3 FinTech categories:

- Blockchain & Digital Assets (20)
- Insurance (19)
- Data Analysis & AI (17)

2.1.3 Munich

Bavaria and the greater Munich area constitute one of Europe's most important innovation centers. The Munich region hosts an active and extensive FinTech scene. After Berlin and Frankfurt, the Bavarian capital is the largest FinTech market in terms of the number of FinTechs. Check24 and Scalable Capital, two of Germany's most successful FinTech companies, have their home base in Munich. The FinTech scene is centered around payments, remittance, wealth management, and personal finance, with many FinTechs positioning themselves as service providers for the banking industry. Munich hosts the Bits & Pretzels conference, one of the most popular events for digital entrepreneurship. Additionally, the two renowned universities, Ludwig-Maximilians Universität and Technische Universität München, contribute to the city's capability to innovate and provide talent. Germany's oldest FinTech media outlet Payment & Banking is also headquartered in Munich.

The digital economy is connected through the initiative Insurtech Hub Munich, bringing together two of the region's core industries; the automotive industry, which accounts for 28% of total revenue, and the insurance industry, with more than 100,000 employees. Established companies and founders work together in Munich to promote the digital transformation of products and services. The local cost level is high. Munich is known for its high wages and rental costs.

Ecosystem Facts and Figures

Focus

#Asset_Management #Automotive_Industry #Investment #Payment #Personal_Finance #Trading
#Wealth_Management

Facts

- 3rd largest number of FinTechs (127 active FinTechs in the Munich region)
- Germany's 4th largest financial center
- 3rd largest German city

Initiatives

- Insurtech Hub Munich

Accelerators & Incubators

- Bitrock Digital Partners
- LMU EC Accelerator
- Plug and Play Munich
- SevenAccelerator
- Tech Founders
- Venture Stars

Top FinTechs (valuation)

- Check24 (n.a.)
- Scalable Capital (€1.3 B)
- finn (€0.6 B)
- Ottonova (€0.3 B)

Listed FinTechs (market cap)

- UMT (€0.0 B)

Top-3 FinTech categories:

- Payment & Remittance (18)
- Asset & Wealth Management (11)
- Personal Finance (11)

2.1.4 Hamburg

Hamburg is the international innovation hub for digital business transformation in finance and logistics. Following a long history of global trade, Hamburg is a cosmopolitan city.

Hamburg is not just one of Germany's oldest banking cities but one of its most innovative financial economies and offers high quality of life and a compact center. The city is Germany's second-largest financial center, with around 50,000 people being employed in the financial services industry. Hamburg is home to a vivid FinTech scene, offering a variety of solutions such as big data, investments, real estate, insurance, credit business, or crypto trading, and hosts renowned events like FinTech Week and Blockchance Conference. It is also home to a strong line-up of FinTech media, including FinanceFWD, Finanz-Szene, Finletter, and others. Furthermore, Hamburg is the best point of contact for digital business transformation in the logistics industry for the region and across Germany. From financing of vessels up to trade & supply chain finance: Start-ups in Hamburg work at the intersection of logistics and finance. Hamburg's FinTech scene is represented and connected through the local initiatives Finanzplatz Hamburg and FinTech Hamburg, bringing businesses, sciences, politics, and public administration together to strengthen Hamburg's financial ecosystem.

Ecosystem Facts and Figures

Focus

#E-Commerce #Global_Trade #Insurance #Investment #Media #Open_Banking #Real_Estate

Facts

- Germany's 2nd largest financial center
- 4th largest number of FinTechs (100 active FinTechs in the Hamburg region)
- 2nd largest German city

Initiatives

- Finanzplatz Hamburg
- FinTech Hamburg

Accelerators & Incubators

- Airbus Bizlab Accelerator
- Comdirect Startup Garage
- Hanse Ventures
- Plug and Play Hamburg
- Truventur

Top FinTechs (valuation)

- finleap connect (€0.1 B)
- bau.fi24 (€0.1 B)
- Exporo (€0.1 B)

Listed FinTechs (market cap)

- The Naga Group (€0.1 B)

Top-3 FinTech categories:

- Investment (10)
- Real estate (10)
- Insurance (8)

2.1.5 Cologne

Cologne has a long history as a center for the insurance industry. Collaborations between established companies and entrepreneurs from the insurance technology sector demonstrate the industry's readiness to develop innovative insurance solutions. Consequently, de:hub's cologne initiative InsurLab Germany mainly focuses on InsurTech to boost the digitalization of the insurance industry. Aside from connecting start-ups, scale-ups, and larger insurance companies, InsurLab Germany organizes insureNXT, a popular international conference introducing the latest InsurTech trends.

The city attracts founders from all over Germany and abroad. There are currently around 650 start-ups with more than 9,000 employees based in Cologne. As for the FinTech ecosystem, the scene is significantly smaller in comparison to Berlin, Frankfurt, Hamburg, and Munich. Nonetheless, the city is home to some successful FinTechs, mainly in the categories of payments & remittance and blockchain & digital assets.

The city's strong focus on digital InsurTech solutions, combined with knowledge transfer between the scientific community and the industry, plays a crucial role in maintaining the competitiveness of the German insurance sector.

Ecosystem Facts and Figures

Focus

#Crypto #Insurance #Payment #Trading

Facts

- 5th largest number of FinTechs (33 active FinTechs in the Cologne region)
- 4th largest German city

Initiatives

- InsurLab Germany

Accelerators & Incubators

- Crossventures
- Gateway
- Founderslande Cologne
- Startplatz
- Xdeck

Top FinTechs (valuation)

- Nextmarkets (€0.1 B)
- Moneymeets (n.a.)

Listed FinTechs (market cap)

- -

Top-3 FinTech categories:

- Insurance (7)
- Payment & Remittance (6)
- Blockchain & Digital Assets (3)

2.1.6 Stuttgart

The Stuttgart region is primarily known for being home to globally renowned industrial companies and numerous world market leaders, e.g., in the automotive industry. Furthermore, the area holds a thriving and diverse ecosystem of SMEs, many of whom are industry leaders in their niche. Due to its economic strength, the Stuttgart region offers a high density of skilled workforce. Notable universities in Stuttgart and in the wider area, such as Hochschule für Technik Stuttgart, Heidelberg University, or Karlsruher Institute for Technology, are contributing in that sense.

Furthermore, Stuttgart is one of Germany's largest financial centers and a critical pillar for economic prosperity in Germany's southwest, for example, by providing an efficient supply of capital for both companies and private individuals. Stuttgart Financial represents the local financial industry. The organization aims to strengthen the local ecosystem by connecting industry leaders with start-ups, investors, and politicians.

Despite the comparably low number of FinTechs based in Stuttgart, the region offers ample opportunities for FinTech companies with innovative solutions for SMEs and the automotive industry. Financing the German "Mittelstand", payments in the Internet of Things (e.g., by autonomous vehicles), and supply chain finance are essential challenges. And agile software development, big data analysis, artificial intelligence, and Blockchain are some of the technologies that help tackle those challenges. To boost Stuttgart's attractiveness for FinTechs, the accelerator Fintogether was launched as a joint initiative of local businesses and organizations.

Ecosystem Facts and Figures

Focus

#Automotive_Industry #Data_Analysis #Education #Real_Estate #Tax #Trading

Facts

- 6th largest number of FinTechs (27 active FinTechs in the Stuttgart region)
- Germany's 3rd largest financial center

Initiatives

- Code_n
- Stuttgart Financial

Accelerators & Incubators

- Arena 42
- Fintogether
- Startup Autobahn

Top FinTechs (valuation)

- Sowa Labs (n.a.)
- Adam Riese (n.a.)
- Comeco (n.a.)

Listed FinTechs (market cap)

- -

Top-3 FinTech categories:

- Social & Education (5)
- Real Estate (3)
- Tax (2)

2.2 Conclusion

The German FinTech hubs differ strongly regarding the number of FinTechs, focus points, infrastructure, industries, or FinTech initiatives. Furthermore, the ability to attract international talent or the overall cost level should be considered when deciding on the best location for a FinTech. In that sense, Berlin and Frankfurt stand out; however, specific local characteristics, such as Cologne's InsurTech focus, can be decisive depending on the FinTech's needs.

Increasing the chances of starting successfully in the German market, FinTechs will find sufficient access to network, knowledge, funding, and talent in all six hubs that were introduced in this section.

3 The German Banking Sector

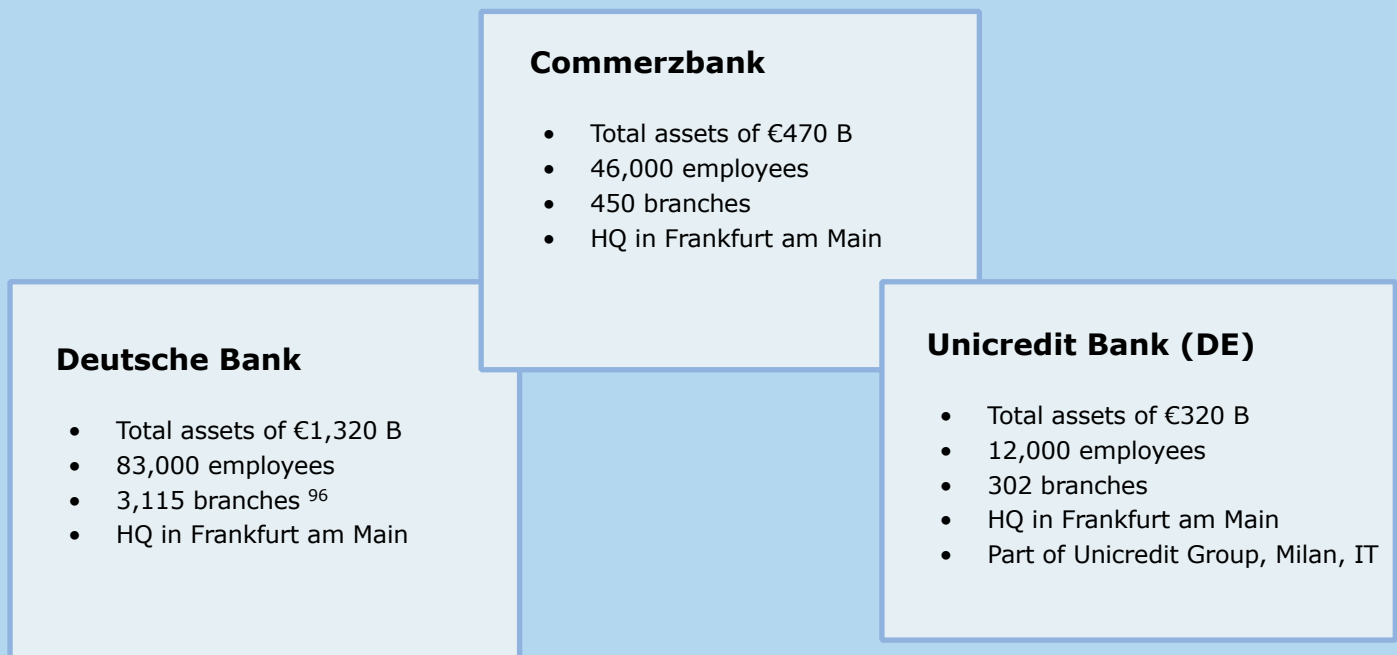
3.1 Banking Sector Portrait

The German banking sector consists of 1,519 different institutions.⁹⁴ This large number is significantly more than in other European countries (e.g., 86 in the Netherlands) and is one of the unique features of the German market. The sector is based on three different pillars of institutions, which will be explored next.

3.1.1 Private Banks

Germany's largest banking pillar is private banks, covering all banks under private ownership. In 2021, private banks accounted for 47% of total assets in the banking sector, employing 29% of the industry's total workforce.⁹⁵ Private banks are represented by the Association of German Banks ("[Bundesverband Deutscher Banken](#)"), based in Berlin.

Germany's largest and most renowned banks are private banks. As universal banks, they offer a wide range of services to retail and business customers, combining digital business and nationwide branch business. Furthermore, they often operate globally. Germany's major banks faced years of consolidation, including declining market capitalization, job cuts, and pressure on costs.



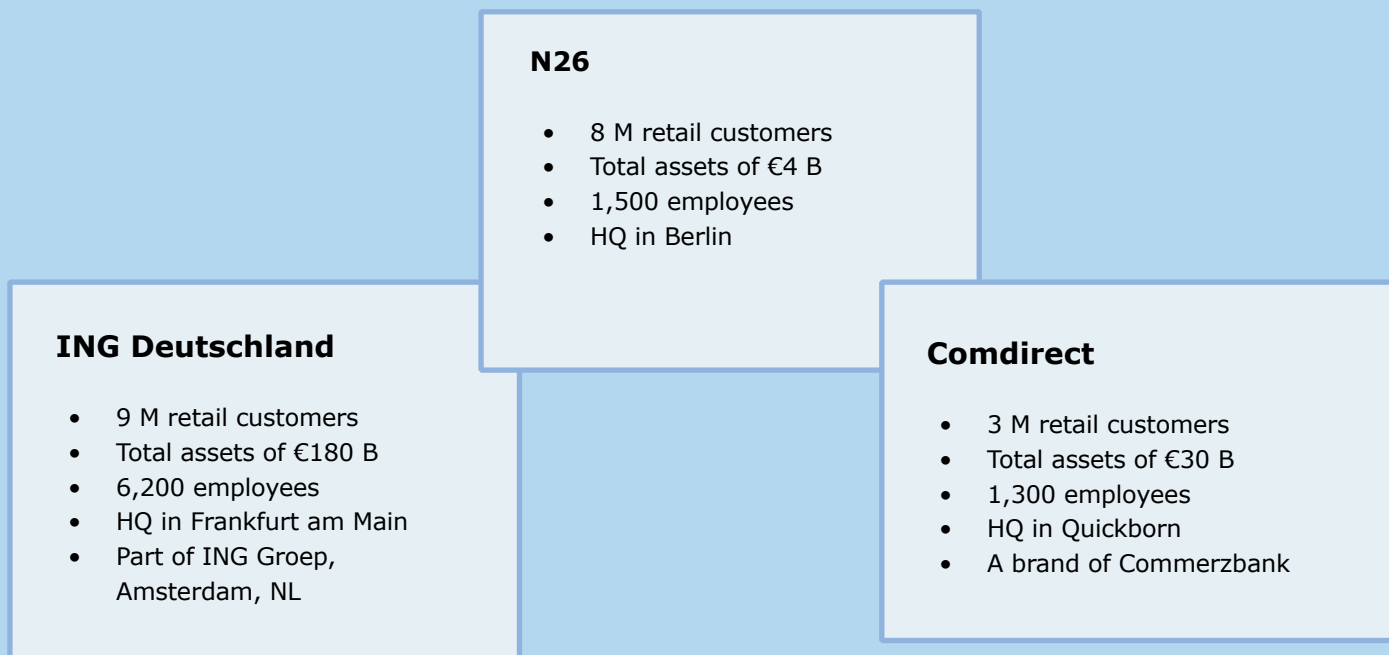
Top-3 Private Banks by Total Assets

Another relevant category of German private banks is direct banks. Unlike major banks, they do not operate branches and focus entirely on online sales and digital services. Those banks are characterized by a higher degree of digitization, a more digitally savvy customer base, and leaner cost structures. The latter allows direct banks to offer very competitive conditions, such as free-of-charge current accounts, leading to solid growth rates in the past years. Challenger banks or neobanks, such as N26, can also be considered direct banks, although they stand out in digitization and business culture.

⁹⁴ Bundesbank, 2022, [URL](#)

⁹⁵ Bankenverband, 2022, [URL](#)

⁹⁶ Including Postbank



Top-3 Direct Banks by Number of Retail Customers⁹⁷

3.1.2 Public Banks

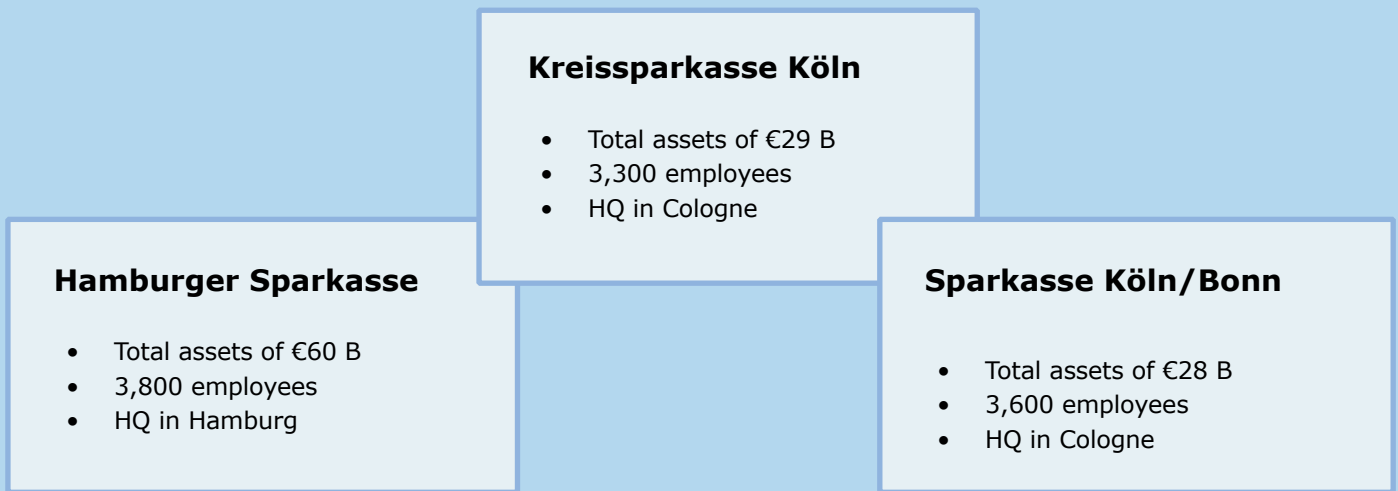
The public banking sector is Germany's second-largest banking sector by total assets (41% of the whole banking sector). Public banks are the biggest employer in the German banking sector, employing around 45% of the workforce.⁹⁸ Public banks are characterized by either being operated as a public legal entity or being under public ownership by a majority. Just like private banks, public banks can cover all aspects of banking services. However, as opposed to private banks, public banks serve public interests, not shareholder interests. Public banks are represented by the Association of German Public Banks („[Bundesverband Öffentlicher Banken Deutschlands](#)“ (VÖB)).

With a tradition of around 200 years, savings banks (Sparkassen) are among the most relevant public banks. In total, there are 371 different savings banks, offering all aspects of banking to private and business customers (SMEs).⁹⁹ Savings banks operate all over Germany, focusing on strengthening the local community. As for digital infrastructure and services, savings banks usually rely on their central IT providers, such as Finanz Informatik or Star Finanz. Savings banks are organized in regional associations and represented at the federal level by the German Savings Banks Association („[Deutscher Sparkassen- und Giroverband](#)“ (DSGV)).

⁹⁷ One of Germany's largest direct banks is Berlin-based Deutsche Kreditbank AG (DKB) with 5 M customers and €135 M in total assets. As a subsidiary of Bayerische Landesbank it is not a private bank and therefore not listed in the top 3.

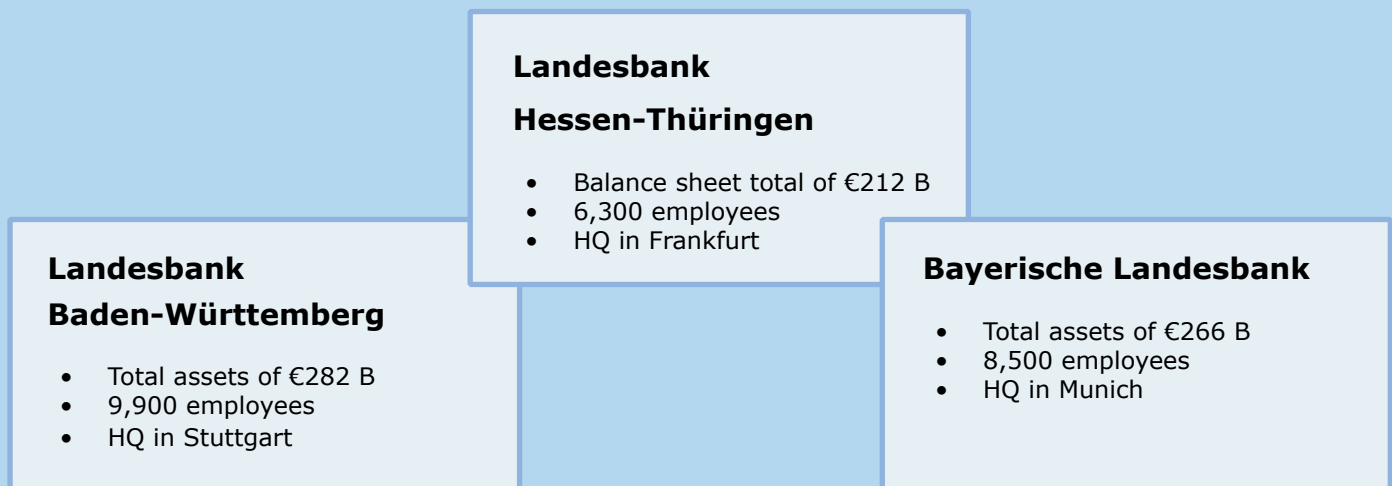
⁹⁸ Bankenverband, 2022, [URL](#)

⁹⁹ DSGV, 2022, [URL](#)



Top-3 Savings Banks by Total Assets

Whereas savings banks mainly focus on private customers and SMEs, the German state banks (Landesbanken) serve larger businesses, wealthy individuals, and institutional investors. State banks do not directly engage in retail banking but indirectly through subsidiaries (e.g., Deutsche Kreditbank being a subsidiary of Bayerische Landesbank). In addition, state banks act as principal banks for the federated states of Germany. Just like savings banks, state banks aim to support economic development.



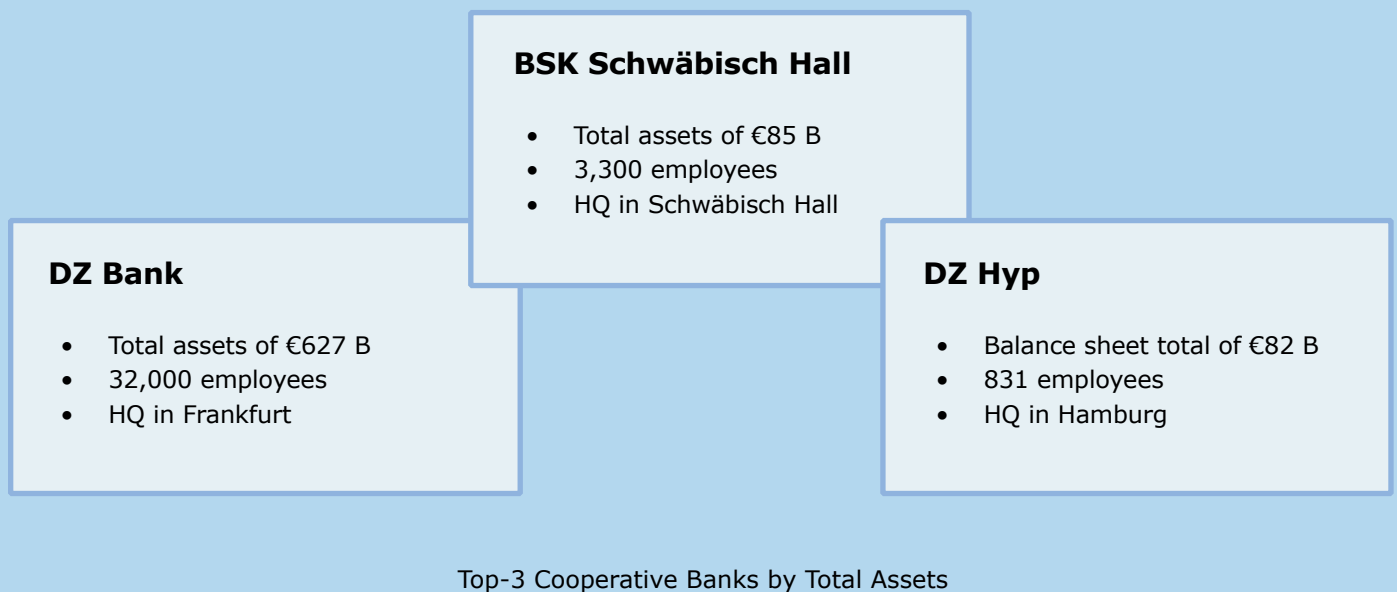
Top-3 State Banks by Total Assets

The public banking sector also includes several promotional banks, among them the "Kreditanstalt für Wiederaufbau" (KfW), which plays a crucial role in improving the economy, society, and environment in Germany but also globally. With total assets of €550 B, KfW is the 3rd largest German bank.¹⁰⁰

100 Die Bank, 2022, [URL](#)

3.1.3 Cooperative Banks

Cooperative banks represent the third pillar of the German banking sector, accounting for 12% of the whole banking sector's total assets and employing 26% of the industry's workforce.¹⁰¹ Cooperative banks are owned by their members. There is a total of 772 cooperative banks with a local focus. Those institutions offer all common banking services, with specialized institutions providing investments, insurance, credit, or savings products. DZ Bank functions as the cooperative banks' central bank. The National Association of German Cooperative Banks ("[Bundesverband der Volksbanken und Raiffeisenbanken](#)") (BVR)) represents the interests of cooperative banks. IT infrastructure and software are primarily supplied by Fiducia IT and Atruvia.



3.2 Partnerships between Banks and FinTechs

When the FinTech trend emerged in Germany several years ago, fierce competition between traditional banks and FinTech companies was expected. Whole industries were disrupted by technology- and innovation-driven market participants, and the potential for superior digital business models seemed enormous in the old-fashioned banking industry. Consequently, German FinTechs were eager to challenge banks. However, the approach changed quickly from competing to cooperating since FinTechs, as well as banks, soon discovered the advantages of joining forces.

FinTechs are strong at developing digital solutions for various use cases in little time and with superior user experience. Most banks were lacking exactly this, and realized that integrating FinTech solutions along their value chain would give them a competitive advantage. Also, with increasing pressure to digitalize, banks could improve their own reputation by cooperating with FinTechs and appearing more modern.

¹⁰¹ Bankenverband, 2022, [URL](#)

From the FinTechs' perspective, partnering with banks also came with several advantages. As highlighted earlier (see **chapter 2, section 1.2.1**), it is challenging to gain the trust of German consumers. By partnering with a bank, FinTechs not only benefit from the bank's trust, but they also get immediate access to millions of customers, allowing them to quickly build a relevant user base. Additionally, banks are financially strong customers, allowing FinTechs to establish solid revenue streams. FinTechs usually charge license fees, per-use, referral, or spreads depending on their business model and services. Furthermore, FinTechs could benefit from the banks' BaFin licenses, allowing them to keep their compliance efforts low.

Nowadays, partnerships between FinTechs and banks account for a large section of the German FinTech ecosystem. Private major banks, direct banks, savings banks, state banks, and cooperative banks have initiated partnerships with FinTechs in recent years. As a result, there are more than 800 active partnerships, with almost two-thirds centered around processes and services and one-third based on investments that major banks predominantly enter. The most relevant categories are investments, finance, online identity, API banking, and payments.¹⁰²

3.3 Opportunities and Challenges for Dutch FinTechs

The mature FinTech ecosystem, in terms of partnerships between FinTechs and banks, offers opportunities and challenges from a Dutch FinTech perspective. A high number of such partnerships in recent years has already paved the way. Potential German partner banks can be expected to have sufficient experience with FinTech partnerships and a willingness to pay for FinTech products, resulting in a high degree of openness towards partnering with FinTechs. Additional potential arises from the size of the German market. Dutch FinTechs seeking new growth opportunities outside of their home market are likely to find them in Germany's large banking sector that can provide access to millions of new customers. Furthermore, collaborating with German banks allows Dutch FinTechs to grow their business cost efficiently with customer acquisition costs and marketing expenses being comparably low. In most cases, banks are eager to promote new features to their existing customer base and due to the trust associated with bank's brands, chances of customers using them are high. Additionally, partnering with a German bank can ensure low compliance costs for Dutch FinTechs as they are likely to benefit from their partner bank's licenses that can function as a regulatory umbrella.

At the same time, these factors make entering the German market more challenging. The banking system is highly complex, with its several institutions, ownership structures, committees, associations, and service providers. Finding and convincing the right people within a bank needs patience which also applies to decision-making. This is particularly true for solutions requiring high efforts in terms of integration into the bank's IT infrastructure since developers are often scarce in banks. Also, German banks often rely on legacy systems with an increased level of technical debt. According to SIA Partners' 2021 Mobile Banking Benchmark, German banks can be found mostly among digital followers and digital laggards, whereas Dutch banks are among digital leaders and digital challengers.¹⁰³ Furthermore, comprehensive solutions can have significant compliance implications (e.g., IT security), increasing outsourcing requirements (e.g., monitoring and reporting) and the number of involved decision-makers. The maturity of the market additionally means that a lot of market potential is already taken by the Dutch FinTechs' German competitors. Moreover, potential partner banks' motives and goals can be unclear and differ from the FinTech's expectations. That said, a partnership mainly entered for reputational reasons by a bank can lead to disappointments regarding the level of ongoing commitment and engagement.

These factors have implications for the strategy of Dutch FinTechs when entering potential partnerships with German banks. Due to the maturity of the market, the value proposition is crucial. Dutch FinTechs should make sure to either ensure superior solutions compared to their German competitors or to find a niche that is still widely untapped. The latter will be explored in more detail within **chapter 3, section 2.4.2**. Generally, solutions that banks can integrate with comparably low efforts, such as app SDKs or APIs, will increase the chances of being considered for a partnership.

¹⁰² PwC, 2020, [URL](#)

¹⁰³ SIA Partners, 2021, [URL](#)

A strong network is crucial to initiate a partnership with a bank, as it will help with finding and getting access to the relevant decision-makers. Additionally, FinTechs can benefit from the trust factor of a strong network. During talks with banks, paying attention to the decision-makers' motives will give a first impression of to which extent banks are willing to engage in the partnership. Potentially low engagement by a bank does not have to be a showstopper for FinTechs but might be a factor in the prioritization of leads and resources. Once the correct group of people in a bank is convinced of the right value proposition to move to the next stage, FinTechs should focus on leaving a professional impression during legal and compliance talks. There is usually a long list of related items that banks want to discuss before signing a contract (see **chapter 3, section 2.3.2** for details). Ideally, FinTechs are prepared to answer various questions and provide information in detail, for instance, regarding applied standards on IT security, data security or data processing, technical and organizational measures, or ownership.

In conclusion, the German banking sector offers plenty of potential for Dutch FinTechs due to its size and many areas still being untapped despite the market maturing in recent years. Using this potential will require a high degree of preparation to ensure that the right people are contacted professionally and with a convincing value proposition. That said, the market and banking sector specifics outlined earlier in this chapter should be taken into consideration.

4 The German SME Ecosystem

4.1 German "Mittelstand"

Whenever Germany's economic strength is discussed, it is likely that the term "Mittelstand" is mentioned. It describes small and medium-sized enterprises and is often referred to as the engine of the German economy. The 3.5 M German SMEs represent 99% of German enterprises. They account for 58% of jobs in Germany and generate 61% of the net domestic product. Furthermore, almost half of the world's "hidden champions" are German SMEs which demonstrates their crucial role in Germany's exports.¹⁰⁴ German SMEs are often highly specialized, offering innovative products and services. 35% of SMEs provide business-related services, 16% act in trading and 10% are engaged in construction.¹⁰⁵

Unsurprisingly, the megatrend of digital transformation is also re-shaping German SMEs. However, adoption rates of digital technology are low, endangering the strong competitive position of SMEs. Currently, they are below the EU average regarding electronic information sharing, use of big data, AI and cloud, online sales, and e-commerce turnover.¹⁰⁶ To boost digital transformation, the German government lately introduced several initiatives support SMEs financially in implementing digital projects. Also, awareness within the SMEs increases, particularly within the trading and the services sector. The need for improving processes, lowering costs, and matching increased customer expectations are seen as main drivers for becoming more digital. SMEs recognize the relevance of digital transformation. Despite reduced turnover in 2021 due to the Covid-19 pandemic, 45% of SMEs plan to increase their digitization budget and 48% will maintain the current level of digital investments.¹⁰⁷

104 BVMW, 2022, [URL](#)

105 DMB, 2020, [URL](#)

106 European Commission, 2022, [URL](#)

107 Deutsche Telekom, 2022, [URL](#)

4.2 Financial Needs and FinTech Potential

Regarding financial services, German SMEs are traditional, with most of them using their principal bank for classic banking services. However, with an increasing willingness to digitalize, it can be expected that the general openness toward new digital services will also increase. Having the need to improve processes and optimize costs also indicates a huge potential for FinTechs. Traditional banking services are often costly, involving time-consuming and cumbersome processes. Most German FinTechs provide solutions for consumers, leaving untapped market potential for Dutch FinTechs to address German SMEs with adequate B2B solutions directly or indirectly by partnering with a German bank. Potential financial needs of German SMEs are comprehensive:

- Corporate account(s)
- Corporate cards
- Financial planning and analysis
- Tax advisory
- National and international payments
- FX conversion; currency risk management
- Raising/lending capital
- Investment tools
- Fraud prevention
- Accepting digital payments

In combination with the above-mentioned pressure to digitalize and the willingness to allocate increased funds to digitalization in the upcoming years (see section 4.1), German SMEs represent a huge market opportunity for Dutch FinTechs. Offering relevant products and services in this market segment can therefore be a great opportunity for business growth. That said, Dutch FinTechs must keep in mind that German SMEs are heterogeneous, and their needs differ greatly. This results in an even more significant importance of market research to increase the chances for success. The complexity needs to be addressed within the product strategy but also the sales strategy. If it comes to addressing the many smaller enterprises, for instance, a lean sales and onboarding approach is crucial to gain a relevant number of customers and achieve profitability. In this regard, SumUp is an example that led to a strong increase in card acceptance among smaller offline retailers. Also, getting access to industry leaders and association is a challenging but important aspect. German SMEs are connected through multiple national and regional associations and initiatives. Identifying and cooperating with the most relevant ones can be crucial to gain visibility and credibility. Further details on those entry points, specific needs and market gaps are discussed **in chapter 3, section 2.4.2.**

5 SHOWCASE: Blockchain and Digital Assets

72 [German FinTechs](#) are active in Blockchain, Digital Assets, and Decentralized Finance. The scene is vibrant, well-organized (e.g., via the [Blockchain Bundesverband](#)), and well-networked internationally. Additional 40 German FinTechs are active in Crypto, which will not be covered here specifically. The German blockchain ecosystem has evolved through several phases, similar to many other countries:

- Core (Ethereum) development in 2014/2015,
- First [Decentralized Applications](#) (Dapps) and the invention of [Decentralized Autonomous Organizations](#) (DAOs) in 2016,
- The [Initial Coin Offerings](#) (ICOs) frenzy in 2017/2018,
- The new wave of [Security Token Offerings](#) (STOs) since 2019, and
- Digital Assets, [Decentralized Finance](#), [Stablecoins](#), and new regulation, e.g., for the custody of digital assets, since 2020.

5.1 German Blockchain Strategy

In September 2019, the German government published its [Blockchain Strategy](#), focusing strongly on the token economy and the financial sector. The objective was to expand Germany's leading position in Blockchain: "Germany is to be an attractive base for the development of blockchain applications and for investments in scaling them up." ¹⁰⁸

In June 2021, a new law came into force: the German Electronic Securities Act ([Gesetz zur Einführung elektronischer Wertpapiere – eWpG](#)). It has implemented a crucial element of the government's Blockchain Strategy by establishing digital & token-based securities.

BaFin, the German regulatory authority, writes: "The eWpG now makes it possible to issue bearer bonds, mortgage bonds (Pfandbriefe), and certain fund units in purely electronic format. While the eWpG does not address registered bonds, registered securities, or order bonds, generally, any bearer-denominated commitment can be the subject of electronic security. This is the case, for example, with conventional bonds, convertible bonds and bonds with warrants, profit-participation certificates, warrants, investment certificates, and structured bonds. (..) According to the previous legal position, financial instruments deemed securities under civil law had to be securitized in a physical certificate. The existence of the certificate enables a transfer according to principles of property law and compliance with provisions of civil law ensuring the protection of good faith." ¹⁰⁹

5.2 Regional Hubs

23 German FinTech active in Blockchain, Digital Assets, or Decentralized Finance are located in Berlin, and 20 in Frankfurt am Main, making them the two major centers for Blockchain in Finance in Germany.

In Berlin, [BerChain e.V.](#) was established in 2019 to connect and promote the Berlin Blockchain Ecosystem. Furthermore, there is [strong support](#) by the Berlin Partner für Wirtschaft und Technologie GmbH, representing Berlin as a city, and the Wirtschaftsförderung Land Brandenburg (WFBB) of the surrounding German state of Brandenburg.

In Frankfurt am Main, the [Blockchain Center of the Frankfurt School of Finance and Management](#) serves as the nucleus of its Blockchain ecosystem, with several successful spin-offs over recent years.

¹⁰⁸ Federal Ministry for Economic Affairs and Energy, Federal Ministry of Finance, 2019, [URL](#)

¹⁰⁹ BaFin, „Now also in electronic form: securities“, August 2021, [URL](#)

"Blockchain technology is exceptionally fascinating. It is a cross-sectional technology and will affect all industries worldwide at some point. In terms of the financial industry, blockchain will change everything that has to do with finance or is organized in monetary terms.

The euro, shares, securities, real estate, CO2 credits... and many other assets will sooner or later run on blockchain systems. We have already seen the US dollar and securities on a blockchain basis. What we might see next is more visionary: a completely new financial ecosystem, a new infrastructure of the financial system."



Prof. Philipp Sandner

**Head of Frankfurt School
Blockchain Center,
Frankfurt School of
Finance & Management**

5.3 Digital Assets

BaFin approved the first German Security Token Offering in early 2019 and followed up with [guidance notes](#), paving the way for the proliferation of Digital Assets. Since then, Digital Assets have become quite popular, tokenizing real estate investments, art, collectibles, and financial instruments like bonds and funds based on the eWpG.

Some German FinTechs provide infrastructure or platforms for potential issuers while others serve as issuers. Here are some of the most relevant players:

LINUS Digital Finance

Founded in 2021
Located in Berlin
Listed company
Tokenized real estate investments
<https://www.linus-finance.com>

360X

Founded in 2021
Located in Frankfurt am Main
Tokenised rights in high-quality art, music, and real estate assets
<https://www.360x.com>

Finexity

Founded in 2018
Located in Hamburg
Tokenized real estate investments
<https://www.finexity.com>

Cashlink Technologies

Founded in 2016
Located in Frankfurt am Main
Digital securities
<https://cashlink.de>

Bitbond

Founded in 2013

Located in Berlin

Tokenized bonds

<https://www.bitbond.com>

Blocksize Capital

Founded in 2018

Located in Frankfurt am Main

Digital assets for institutional investors

<http://www.blocksize-capital.com>

STOKR

Founded in 2019

Located in Hamburg and Luxemburg (HQ)

Digital shares

<https://stokr.io>

RIDE Capital

Founded in 2018

Located in Berlin

Tokenized real estate investments

<https://ride.capital>

5.4 Custody

Since 01 January 2020, after the new German Act Implementing the Amending Directive on the Fourth EU Anti-Money Laundering Directive was enacted, the custody of cryptocurrencies and certain digital assets requires authorization from BaFin (see also **chapter 1, section 10.5**). While some existing custody providers applied for a BaFin license at that time, also new players entered the market. As of today, there is a highly competitive market for custody services in Germany:

Finoa

Founded in 2018

Located in Potsdam

Custodian platform for institutional investors

<https://finoa.io>

DECUS Network

Founded in 2020

Located in Berlin

Crypto custody API & middleware

<https://www.decus.network>

Tangany

Founded in 2019

Located in Munich

Crypto custody

<https://tangany.com>

DLT Custody

Founded in 2019

Located in Frankfurt am Main

Safekeeping of digital assets

<https://digital-assets-custody.com>

Kapilendo Custodian

Founded in 2013

Located in Berlin

Crypto custody

<https://www.hal-privatbank.com>

Trustody

Founded in 2019

Located in Frankfurt am Main

Crypto custody for institutional investors

<https://www.trustody.io>

5.5 Decentralized Finance

Decentralized Finance (or DeFi) has great growth potential in Germany. This is the result of a study by Fraunhofer FIT, which compares the opportunities and challenges.¹¹⁰

It was also underscored a year ago, in October 2021, when Berlin-based Unstoppable Finance raised €4.5 M in its seed round “to bring decentralized finance to mainstream investors” – only a few months after its incorporation. In August this year, it added a series A round of €12.5 M after 300,000 beta users subscribed to the waiting list for its ‘Ultimate’ DeFi wallet.^{111, 112}

BaFin, the German regulatory authority, seems to be more cautious. In May 2022, Birgit Rodolphe, an Executive Director at BaFin, warned of the risks of an unregulated DeFi space for consumers and called for innovative and uniform DeFi regulation throughout the EU to avoid market fragmentation.¹¹³

Here are some of the leading DeFi players in Germany:

Ultimate / Unstoppable Finance

Founded in 2021
Located in Berlin
Access layer to decentralized finance
<https://ultimate.money>

Advanced Blockchain

Founded in 2017
Located in Berlin
Listed company
DeFi builder
<https://www.advancedblockchain.com>

Alloy

Founded in 2022
Located in Berlin
DeFi infrastructure for institutional investors
<https://www.alloy.capital>

Mangata Finance

Founded in 2020
Located in Berlin
DeFi bridge
<https://mangata.finance>

Li.Finance

Founded in 2021
Located in Berlin
Cross-chain swap across liquidity pools and bridges
<https://li.fi>

Pile

Founded in 2022
Located in Berlin
Access to DeFi products
<https://www.pile.capital>

¹¹⁰ Fraunhofer Institute for Applied Information Technology FIT, 2022, [URL](#)

¹¹¹ EU-Startups, October 2021, [URL](#)

¹¹² tech.EU, 2022, [URL](#)

¹¹³ BaFin, May 2022, [URL](#)

5.6 Other Blockchain Applications in Finance

Besides Digital Assets and DeFi, there are several other successful use cases of Blockchain technology in Finance. Many of the solutions are unique. Here are some examples:

Ubirch

Founded in 2014
Located in Cologne
Blockchain for capturing IoT sensor data
<https://ubirch.de>

MXC Foundation

Founded in 2018
Located in Berlin
Coin-based machine-to-machine transactions
<https://www.mxc.org>

BigchainDB

Founded in 2014
Located in Berlin
Blockchain database
<https://www.bigchaindb.com>

CircularTree

Founded in 2018
Located in Berlin
Supply chain compliance management
<https://www.circulartree.com>

5.7 Bridging between the Netherlands and Germany: Quantoz

One of the first Dutch Blockchain companies, which has successfully expanded to Germany, and is a role model for others, is [Quantoz NV](#). Quantoz was founded in 2015, is located in Utrecht, and offers asset tokenization and token-based IoT payment solutions.

Henri de Jong, Chief Business Development Officer, has been active in both countries for more than 15 years and has presented Quantoz's solutions countless times in Germany.

"Germany is the most significant market for our services. The famous German "Mittelstand" is open to innovation, and with its proactive approach, BaFin defined the rules and the playfield for blockchain technology at an early stage.

With our ISO 27001 and ISAE 3402 certifications in place, and our e-money application in progress, Quantoz trusts it can serve Europe's biggest economy."



Henri de Jong

**Chief Business Development
Officer, Quantoz**

5.8 Entering the German Market

There are plenty of opportunities for Blockchain companies in the German (financial) market, for instance, in providing platforms for Digital Assets and in further developing Decentralized Finance to become mainstream.

Germany offers two major Blockchain hubs and several smaller ones to get started. Furthermore, it is recommended to join a German Blockchain association to receive first-hand information about regulatory developments and other trends.

Blockchain developers and experts are in high demand and short supply, like almost everywhere else. Close cooperation with selected German universities to identify and develop talent is advised. The following universities offer Blockchain-related studies (in alphabetic order):

- [CODE University Berlin](#)
- [Frankfurt School of Finance & Management](#)
- [Hochschule Augsburg](#)
- [Hochschule Mittweida](#)
- [Technische Universität Berlin](#)
- [Technische Universität Darmstadt](#)
- [Technische Universität Munich](#)
- [Universität Wuppertal](#)

For testing the waters, there are many conferences and events to present new solutions:

- [Blockchance](#), Hamburg
- [Blockchain Week](#), Berlin
- [Block im Park](#), Frankfurt am Main
- [C3 Crypto Conference](#), Berlin
- [Crypto Assets Conference](#), Frankfurt am Main
- [CryptX](#), Offenbach (near Frankfurt)
- [Next Block Expo](#), Berlin

While many smaller events (in particular, meetups) moved online during the pandemic, the trend has returned to hybrid or in-person events, which regularly offer better feedback opportunities on presentations.

6 SHOWCASE: Cybersecurity and Fraud Prevention

Cybersecurity is an essential building block for financial and other technical services in Germany. The topic is also on the agenda for many government institutions. The Federal Ministry of the Interior and the Community released a five-year cybersecurity strategy in 2021,¹¹⁴ covering the following areas:

- Establishing cybersecurity as a joint task of the state, business, science and society,
- Strengthening the digital sovereignty of the state, the economy, science and society,
- Shaping digitalization securely, and
- Making goals measurable and transparent.

According to Crunchbase, 404 companies are active in Germany in the Information Technology, Privacy and Security verticals.

6.1 The Importance of IT Security for the German Market

As revealed in the prior parts of the study, German consumers are historically conscious about data privacy and cybersecurity. Market experience shows that consumers do not tick the consent boxes for the sake of completing the onboarding process and read the fine print to understand how their data is being used, protected and by whom. As a direct result of this cultural sensitivity, cybersecurity weaknesses and data leaks experienced by tech companies, especially the ones handling or overseeing financial data, are not easily tolerated by the society.

The Federal Office for Information Security's annual survey reveals a discrepancy between IT security sensitivity and protective action. According to the survey, two-thirds of the respondents (67%) are familiar with security recommendations on how to protect themselves against online crime (65%), with some implementing such suggestions at least partially (37%) and over one in ten fully (12%).¹¹⁵ Those who are aware of security recommendations but have not implemented them (12%) stated that this would require too much effort, or that the recommendations were too complicated to understand.¹¹⁶

¹¹⁴ Federal Ministry of the Interior and the Community (BMI), "Cybersicherheitsstrategie für Deutschland 2021," August 2021.

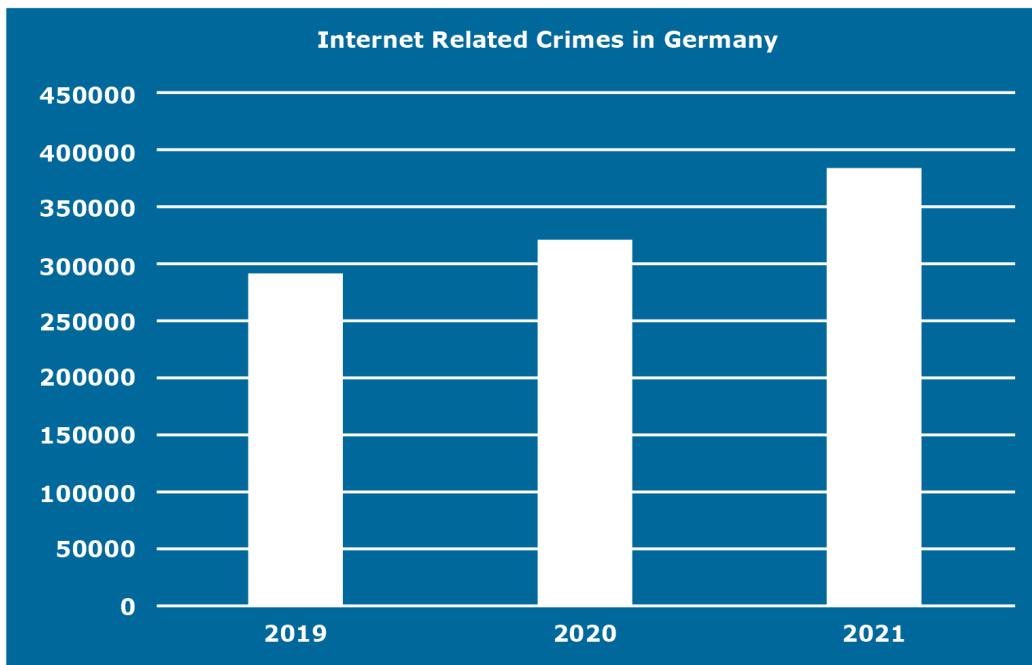
¹¹⁵ Federal Office for Information Security (BSI), "The State of IT Security in Germany in 2021," p. 47.

¹¹⁶ Ibid

6.2 Post-Pandemic Developments

Just like in many other geographies, Germany's digital adoption and online shopping rates changed after the pandemic. According to research data from 2021,¹¹⁷ four out of ten online shoppers have been buying more online since the pandemic. The same research also reveals that 20% of Germans have started buying products like clothing, shoes, or accessories online for the first time during the pandemic, which is observed to continue to this day. A similar trend has been observed for digital payment and banking adoption.

Although the digital adoption is good news for start-ups, the demand boost for e-commerce and internet banking highlighted the vulnerabilities of many prominent corporations' online presences and led to several major cybersecurity attacks.¹¹⁸ Last year's research data show that 25% of all Germans have been a cybercrime victim in one way or another in 2021 and the younger age group (19-29y) represents about a third of victims.¹¹⁹ Accordingly, most common cybercrimes were online account break in (9%), smishing (7%), online shopping fraud (6%) and phishing (5%).



Source: Global Anti Scam Alliance - GASA, "The Global State of Scams Report – 2022: How are countries worldwide fighting online scams."

The IT Security Act 2.0¹²⁰ was adopted by the German Bundestag in April 2021, and was considered an important landmark for IT security. The act was believed to provide a clear-cut and urgently needed upgrade to cyber security and information security in Germany,¹²¹ especially for critical sectors like the financial sector. However, cyberattack practices are unavoidable and expose financial organizations more than others. According to research by Atlas VPN dated August 2021, the financial cost of data breaches soared to 6 years high as of 2021¹²² and the costs are above average for financial service players globally.

117 Bitkom, "E-commerce trends in 2021: this is how Germans shop online," research conducted between mid and late October 2021, [URL](#)

118 Kocaoglu Ulbrich, Sebnem Elif, "COVID-19: Exploiting Finserv Vulnerabilities," The LHoFT Blog, [URL](#)

119 Global Anti Scam Alliance - GASA, "The Global State of Scams Report – 2022: How are countries worldwide fighting online scams," p. 32.

120 The second act on increasing the security of IT systems (Zweites Gesetz zur Erhöhung der Sicherheit informationstechnischer Systeme vom 18.Mai 2021), [URL](#)

121 Federal Office for Information Security (BSI), "The State of IT Security in Germany in 2021," p. 4.

122 Kocaoglu Ulbrich, Sebnem Elif, "Cyberattacks: Fool Me Once, Shame on You; Fool Me Twice, Shame on Me," The LHoFT Blog, [URL](#)

According to the Federal Office for Information Security (BSI), deficiencies relating to technical information security in the finance and insurance sector in Germany were frequent compared to other sectors.

It must be added that some data leak cases are likely to have made German consumers more susceptible to cyberattacks. Noteworthy targets from the past years include Klarna, Gorillas, Mastercard, Revolut, and N26.

6.3 Critical Infrastructure

After the suspected sabotage on the Nord Stream 1 and 2 gas pipelines,¹²³ potential critical infrastructure attacks and vulnerabilities rose high on the political agenda.

Critical infrastructure within the meaning of the Act on the Federal Office for Information Security comprises facilities, systems or parts thereof belonging to the energy, information technology and telecommunications, transport, health, water, food, finance, or insurance sectors and are essential for the functioning of society, because their failure or disruption would lead to considerable supply shortages or risks to public safety and security in Germany.¹²⁴

Considering the systematic attacks on corporate IT systems since the start of the pandemic and the recent warnings from the German military and politicians,¹²⁵ financial service providers are advised to take extra caution and re-evaluate their outsourcing partners from an IT security point of view.

123 When a suspected sabotage attack fractured the Nord Stream 1 and 2 lines on Sept. 26, a significant amount of natural gas was released into the atmosphere.

124 BaFin, "Critical infrastructure," [URL](#)

125 According to Deutsche Welle, Foreign Minister Annalena Baerbock told government officials during a conference in September that the country needs to ramp up its cybersecurity measures "to ensure that during a major cyber-attack, people in Germany can still use railways and receive medical treatment, and that police forces can still operate," [URL](#)

6.4 Cybersecurity Ecosystem

Darmstadt (in Frankfurt Rhein-Main region) is a major cybersecurity ecosystem in Germany and was appointed as Germany's digital hub for Cybersecurity by the German Ministry of Economic Affairs and Climate Action in 2017. It comprises the [Technical University of Darmstadt](#), [Darmstadt University of Applied Sciences](#), [Fraunhofer SIT](#), Germany's National Research Center for Applied Cybersecurity [ATHENE](#), several other research institutions, incubators like StartUpSecure, corporates and start-ups like Authada, as listed below.

German start-ups operating at the intersection of FinTech and Cybersecurity include:

IDEE

Founded in 2015
Located in Munich
Multi-factor-authentication for financial service providers
<https://de.getidee.com>

Trustless

Founded in 2016
Located in Berlin
Mobile security device for financial transactions
<https://trustless.ai>

Statice

Founded in 2018
Located in Berlin
Synthetic client data management
<https://www.statice.ai>

Authada

Founded in 2015
Located in Darmstadt
ID card-based online identification
<https://authada.de/en>

Baobab

Founded in 2021
Located in Berlin
Cybersecurity insurance
<https://www.baobab.io>

Keyp

Founded in 2017
Located in Munich
Secure B2B sign-up
<https://keyp.io>

Seal One

Founded in 2009
Located in Frankfurt am Main
Mobile security device for financial transactions
<https://www.seal-one.com>

Hawk: AI

Founded in 2018
Located in Munich
AML and fraud surveillance
<https://hawk.ai>

Hanko

Founded in 2018
Located in Kiel
Secure login
<https://www.hanko.io>

Fraugster

Founded in 2014
Located in Berlin
Merchant fraud prevention
<https://www.fraugster.com>

6.4.1 Data Security versus Digital Identity and Onboarding

Digital identity is a fundamental step for digitalization and seamless digital finance. However, questions about digital identity still stir political and social debates in Germany, mainly focusing around cybersecurity, data privacy and democracy.

Ready or not, Germany is getting closer to a future with digital identity, due to the EU and German political agenda.

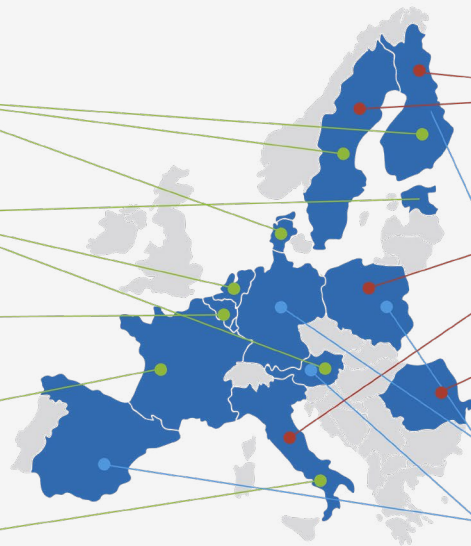
There are a number of German FinTechs focusing on B2B and B2C KYC and digital onboarding solutions, including, [WebID Solutions](#), [IDnow](#), [Spherity](#), [Verimi](#), [WebShield](#), [Identify](#), [Authenteq](#), [Onfido](#), and [Idento.one](#). They play an important role in enabling online account opening and other financial services which require strong identification checks. BaFin was one of the first regulatory authorities worldwide to approve video authentication in 2017.¹²⁶ The process has become a major driver for FinTech growth in Germany.

¹²⁶ BaFin, Circular 3/2017 (GW) - Video identification procedures, Last Access Date: 30.09.2022, [URL](#)

Digital Identity in Europe

IDENTITY MODELS

- Sweden, Finland & Denmark**
Open public-private identity network models
- Estonia, Austria & Netherlands**
Centralized government solutions for digital identity
- Belgium**
Private platform-based network, adopted by government
- France**
Digital identity model in which government competes also
- Italy**
Mainly private identity providers, directly connected to relying partners



ADOPTION

- Sweden & Finland**
Long history and high adoption of digital identity services
- Poland & Italy**
Sudden surge of adoption through mandated use case
- Romania**
First steps in digital identity with eID pilot

INNOVATION

- Germany, Spain & Finland**
High upcoming attention for decentralised identity
- Poland & Austria**
First movers with digital identity wallets

Source: The Paypers, "Financial Crime and Fraud Report 2022"

6.4.2 Entering the German Market

Every crisis represents an opportunity, and the fact that Germany has some catching up to do means that there is space for cybersecurity, IT infrastructure and fraud prevention platforms.

The common market experience in working with international Cybersecurity companies, especially from non-EU states like Israel or Turkey, shows that it is difficult to enter the German market without a creditable partner, even with a superior technology. The potential partner should be well-connected in the financial industry in Germany, particularly with the Cybersecurity Officers of leading financial service providers. The sales cycles for building up trust with the various departments in charge on the clients' side (e.g., risk management, IT, legal, customer management) are likely to be long and detailed.

However, there are a few successful examples, such as the German-Israeli FinTech Fraugster.

As for KYC and onboarding solutions, the lack of compatibility and interoperability between the German and Dutch regulations (e.g., video identification vs. selfie identification) creates additional expansion layers and challenges for Dutch financial service players. To specify, Dutch companies entering the German market with a German entity would need to use the video identification system, which could be considered a technological and operational regression. Such a step would also create additional operational and economic burdens due to the costs and the procedures of the BaFin-accepted KYC and onboarding methods. If, however, a Dutch company operates in Germany via a Dutch entity and therefore uses local KYC methods, such improvement can create a competitive advantage. Such a change might also be greeted with resistance by German customers, due to data privacy and cybersecurity concerns. Therefore, the sweet spot in these situations will need to be investigated on a case-by-case basis, depending on the solution and the target user crowd. However, if the FinTech solution is planning to use a novel technology for the German market, customer education and reassurance is recommended to be factored in as a part of the onboarding process.

Chapter 3:

German Market Trends, Future Viewpoint and Expansion

About this Chapter

The third and last chapter intends to shed light on the current and future market and investment trends, using available data and interviews with key public and private sector stakeholders. Later, the chapter will take a more practical direction and discuss the success factors in the German FinTech market. Finally, the chapter will conclude with a compatibility study for foreign FinTechs, who want to assess whether they are ready to enter the German market yet or whether there are remaining tasks to tick off the expansion list.

Chapter Outlook

Before deep diving into the practical side of German expansion, this chapter will study the FinTech market trends in Germany. A comprehensive analysis of the expectations and reality for 2022 will be used as an intro to a deeper examination of 2022 developments and trends in the market. Later, the analysis section will evolve into a practical expansion guide, investigating success factors in the German market along with the market gaps, which could inspire foreign start-ups. The chapter will end with an evergreen market compatibility checklist for foreign FinTech start-ups.

1 FinTech Market Trends in Germany

1.1 Overview

The first German FinTechs can be traced back to the late 90s, improving the value proposition of local financial service providers with efficiency. The consumer-facing FinTechs, however, started their debut a bit later, signaling slower digital finance adoption compared to markets such as the UK, the US, and China.

After a slow yet steady start, Germany is ready to compete with the other more prominent regions and is en route to dominating the EU's FinTech scene. The ecosystem is even claimed to be the fourth largest in the world¹²⁷ and is growing every day.

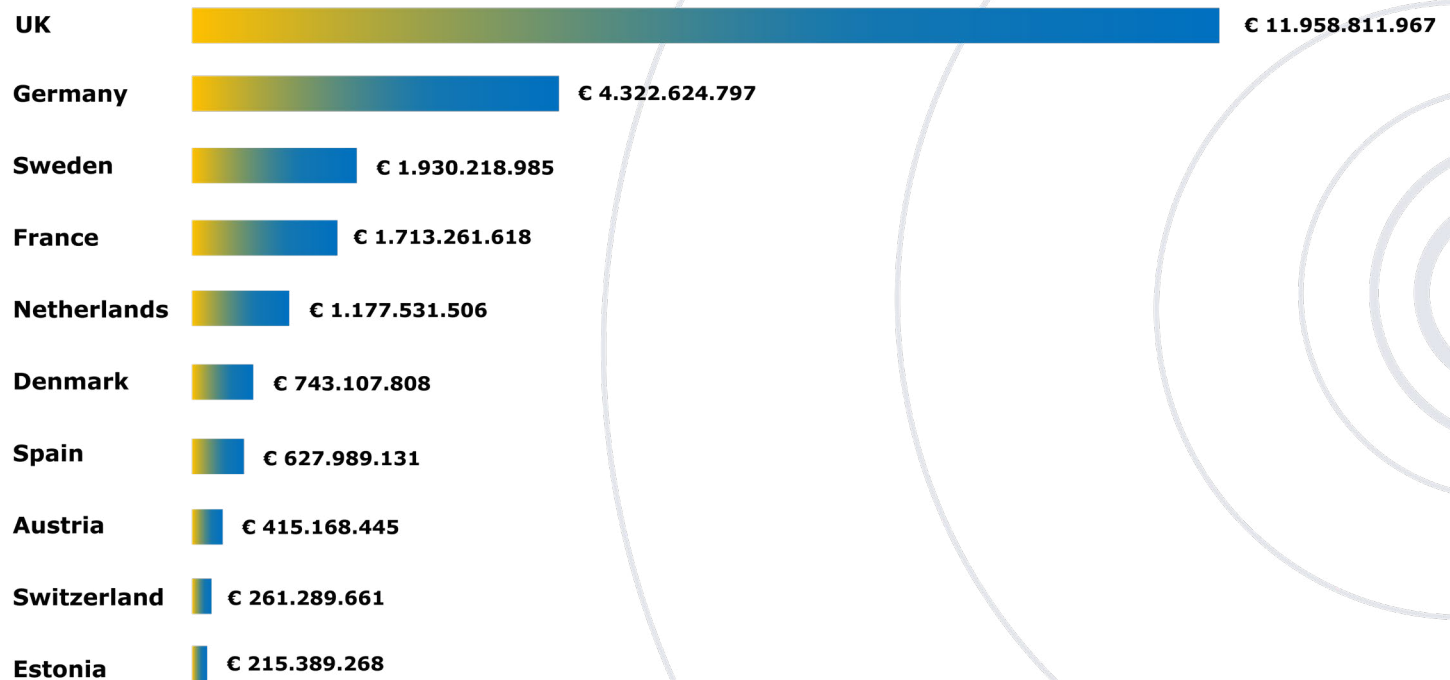
Despite the year-on-year growth of activity and investment, the (positive) growth trend was recently interrupted by external local, and international developments. Germany had its share of the global turmoil and change of conjecture, just like other markets. Nevertheless, each market takes a different turn during a crisis, and Germany also had a shift in market focus and priorities recently. As a result, there is a big gap between experts' 2022 forecasts from last year, projections from the beginning of the year, and current predictions.

¹²⁷ Source: Germany Trade & Invest (GTAI)

1.2 Market Predictions for 2022

German firms featured heavily among Europe's ten most funded FinTechs in 2021.¹²⁸

Top 10 countries for fintech investment in 2021



Source: TechEU

In 2021, 63% of German FinTech start-ups received additional funding.¹²⁹ There were fewer but larger funding rounds.

In 2021, 55% of all FinTechs in Germany were younger than five years old.¹³⁰ As a result of a positive outlook in the past years, Germany moved upwards in the Global FinTech Country Rankings of 2021 to number nine and to number five in the European Rankings, following right behind the Netherlands.¹³¹

2021 also allowed Germany to expand its hub database, adding Stuttgart to the list.¹³² More information about 2021 fundraising can be found in **chapter 1**.

Overall, 2022 portrayed a strong start for the German FinTech ecosystem.

Before the year started, the following topics were predicted as the leading market trends.

128 Findexable, "FinTech in Europe, The Quiet Revolution 2022, Bridging the Gap," 03.08.22, p. 18

129 Bundesverband Deutsche Start-ups e.V., "FinTech Start-up Monitor 2021," p. 27

130 Germany Finance, "German FinTech Report 2021, Hubs und Trends im deutschen FinTech Ökosystem," p. 17

131 Findexable, "Global FinTech Rankings Report, Bridging the Gap 2021," 29.06.21, p. 21-2

132 Findexable, "Global FinTech Rankings Report, Bridging the Gap 2021," 29.06.21, p. 67

1.2.1 Embedded Finance & BaaS

If 2021 had a name for the German FinTech sector, it would be “embedded finance.” Embedded finance is the solution for expanding the product and service scope for non-financial companies.

Germany developed some household brands in the BaaS and PaaS verticals in the past years. It, therefore, was predicted to continue to be at the heart of embedded finance developments.

Some significant embedded finance examples from the past years include:

- **Solaris & Paycell:** Turkish mobile operator Paycell announced its cooperation with Solaris in October 2022 as a teaser of its German market entry. The collaboration aims to create a European super app using Solaris' banking interface.
- **Solaris & Auto1:** Germany's well-known platform for used cars, Auto 1, announced its collaboration with Solaris to get support for second-hand car financing processes.
- **Solaris & Otto:** Otto, the German household e-commerce marketplace, shook hands with Solaris in 2020 to improve its B2B legitimation processes.
- **Amazon & Lendico:** ING Deutschland has been offering loans to Amazon's merchants via its subsidiary Lendico since the summer of 2020.
- **Solaris & Grover:** Grover, the Berlin-based rental e-commerce, offers a Visa debit card together with Solaris. The Grover Card provides discounts on rental products and cashback.
- **Metro AG & Vodeno:** The German wholesale leader Metro AG started entering financial services for an end-to-end experience for their customers. Metro AG will offer payments and BNPL services in cooperation with the Polish BaaS Vodeno, [according to FinTech Futures](#), and to [Michael Zyber, the CEO of Metro Financial Services](#).
- **AAZZUR & Channel Capital:** Berlin-based embedded finance enabler AAZZUR partnered with alternative asset manager Channel Capital for SME financing.

In 2022 many foreign BaaS providers, such as Vodeno, Treezor entered the German market via pilot products and customers, heating the competition.

Case Study: Local Enablers of Embedded Finance

- AAZZUR
- Banxware
- Fidor Bank¹³³
- FinTech Bank AG
- Mambu
- Railsbank
- Raisin Bank
- Solaris
- Sutor Bank
- Treezor
- Upvest
- Weavr
- Yapily
- & more

133 According to finanz-szene, Fidor Bank will be liquidated and will cease its operations by mid-2024, [URL](#)

1.2.2 WealthTech and Digital Assets

The WealthTech and digital asset trend triggered by the pandemic spread to Germany in no time. As a result, the number of WealthTech companies skyrocketed in 2021, increasing competition.

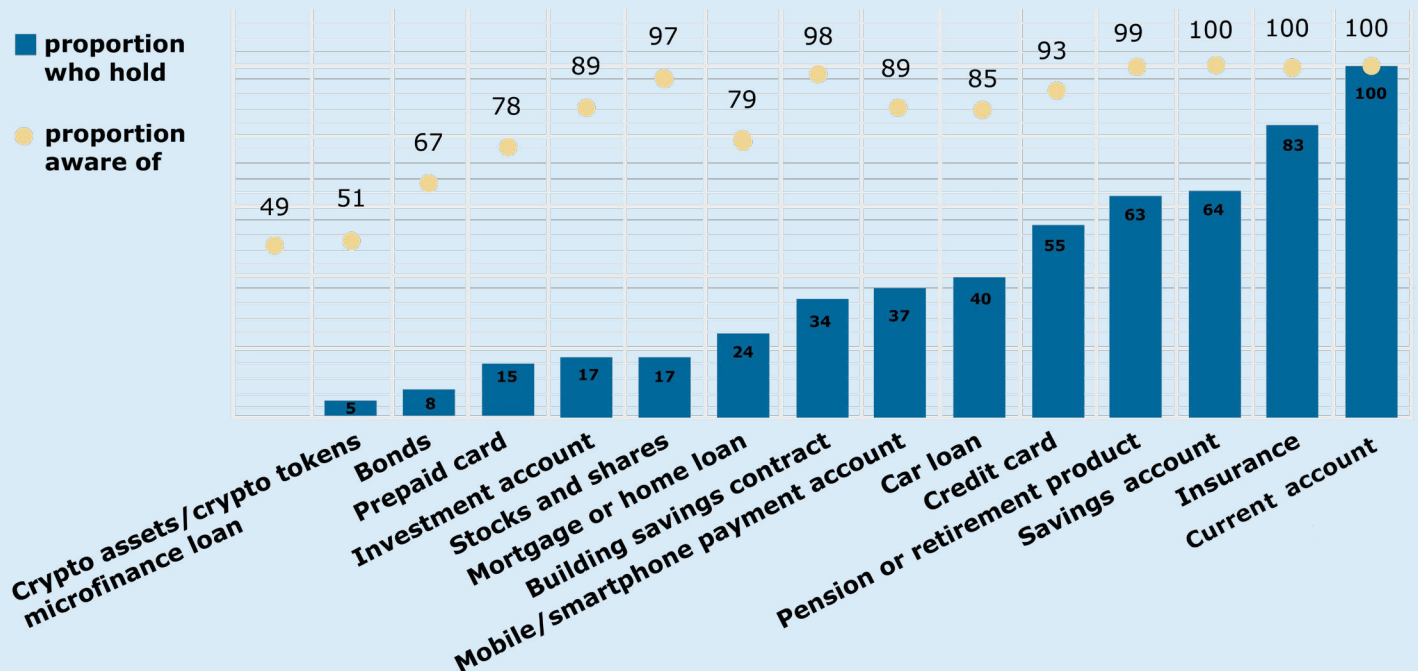
Neobrokers increased their influence among German consumers in the past two years, forcing direct banks and neobanks to add trading features. German Equity Institute confirmed expert predictions; the confidence of savers in equities strengthened in 2021.¹³⁴ 12.1 million people had shares, equity funds, or ETFs in their portfolio last year, and around 17% were involved in the stock market.¹³⁵ Therefore, more established players such as Trade Republic, Scalable Capital, Flatex, eToro, Just Trade, Smart Broker, finanzen.net and Zero are now challenged by newer offers from Unitplus, Moniflo, Shares, along with traditional bank and neobank offers.

The same was true for digital asset companies. Recent studies surprise even the experts, informing the region's unexpected digital asset adoption growth. Accordingly, Germany grew the fastest in Western and Central Europe. A Chainalysis study¹³⁶ shows that the crypto transaction volume in Germany rose by 47%, an additional 17% or more compared to other markets, while in the Netherlands, on-chain activity decreased by 3%.

The number of Germany-based digital asset and DeFi providers also increased in the past year. An exhaustive list of practitioners can be found under the **blockchain showcase** in chapter 2.

This change of attitude is surprising, especially since the German consumer mentality has always been closer to saving than investing, making saving brokers such as Raisin and Deposit Solutions more attractive. BaFin's conclusions from the 2019 research¹³⁷ illustrate consumer attitudes before the pandemic; "The majority of consumers take a cautious, forward-looking approach to their financial affairs and avoid risks. Savings accounts and current accounts are particularly popular with savers. Crypto tokens are of no relevance to consumers at present. The majority of people are planning for retirement by paying into a private or occupational pension plan or investing in financial assets."

Awareness and holding of financial products



Source: BaFin

134 Deutsches Aktieninstitut, "Deutschland und die Aktie Aktionaerszahlen," 2021, p. 3

135 Ibid

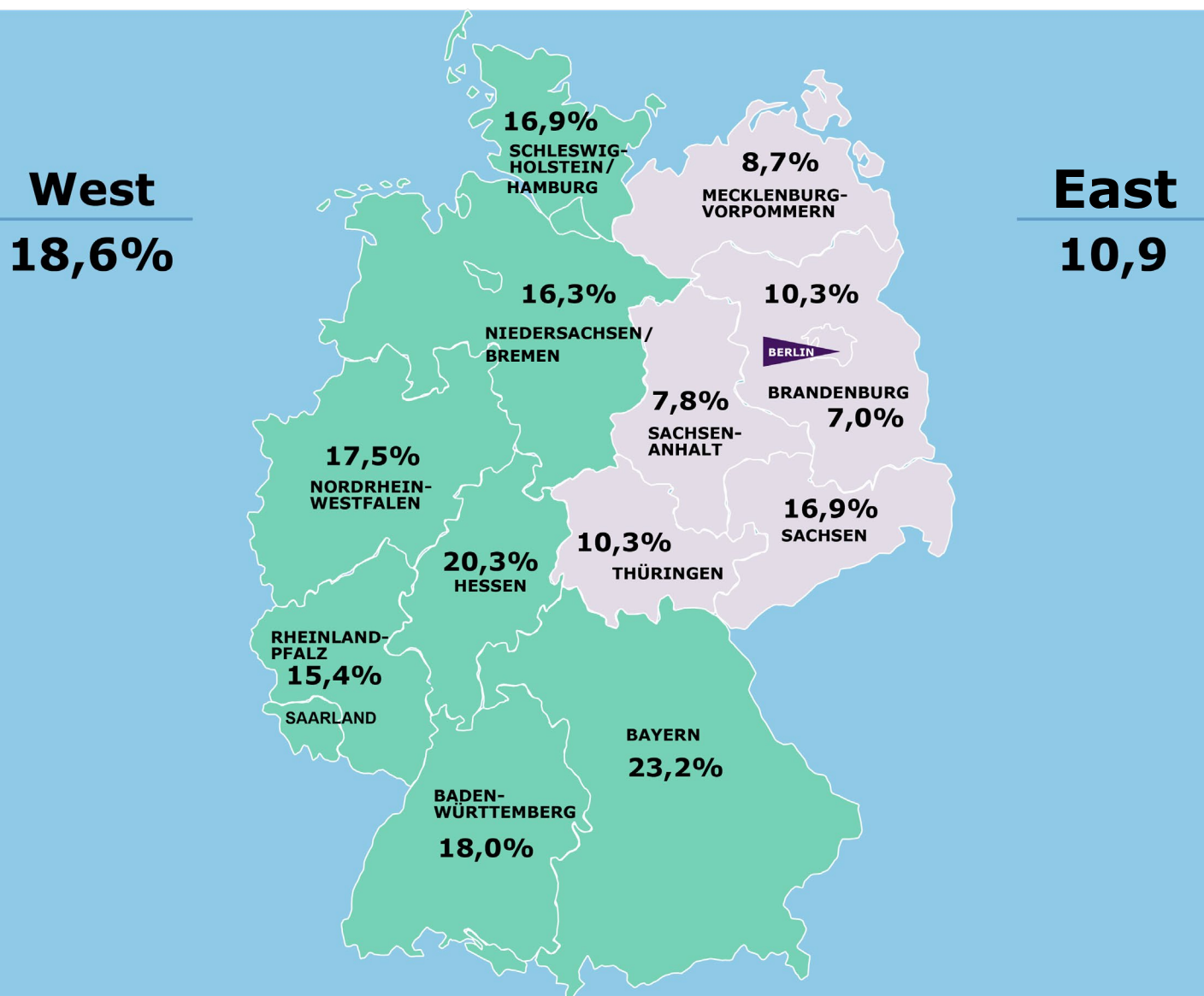
136 Chainalysis, "The 2022 Geography of Cryptocurrency Report," 10.22., p. 31

137 BaFin, "Survey of Adult Financial Literacy Competencies in Germany 2019," 05.22

However, with the pandemic, the tables have turned, encouraging the average German consumer to try out stocks, ETFs, and even more complicated financial products such as digital assets. Even less risky investment product brokers such as Raisin and some neobanks, including Vivid Money, added ETFs and cryptocurrencies to their portfolios. The emergence of alternative investment companies such as Finexity, Splintinvest, Silverpine demonstrates how the ecosystem is changing.

Financial education initiatives targeting women due to the investment gender gap in Germany increased in the last years. According to the German Equities Institute,¹³⁸ only one of every three equity investors is female. Current women-focused WealthTech players include Finmarie, Vitamin, and Financery.

German Equities Institute researches reveal that there is also an investment gap between East and West Germany due to income and traditional differences.¹³⁹

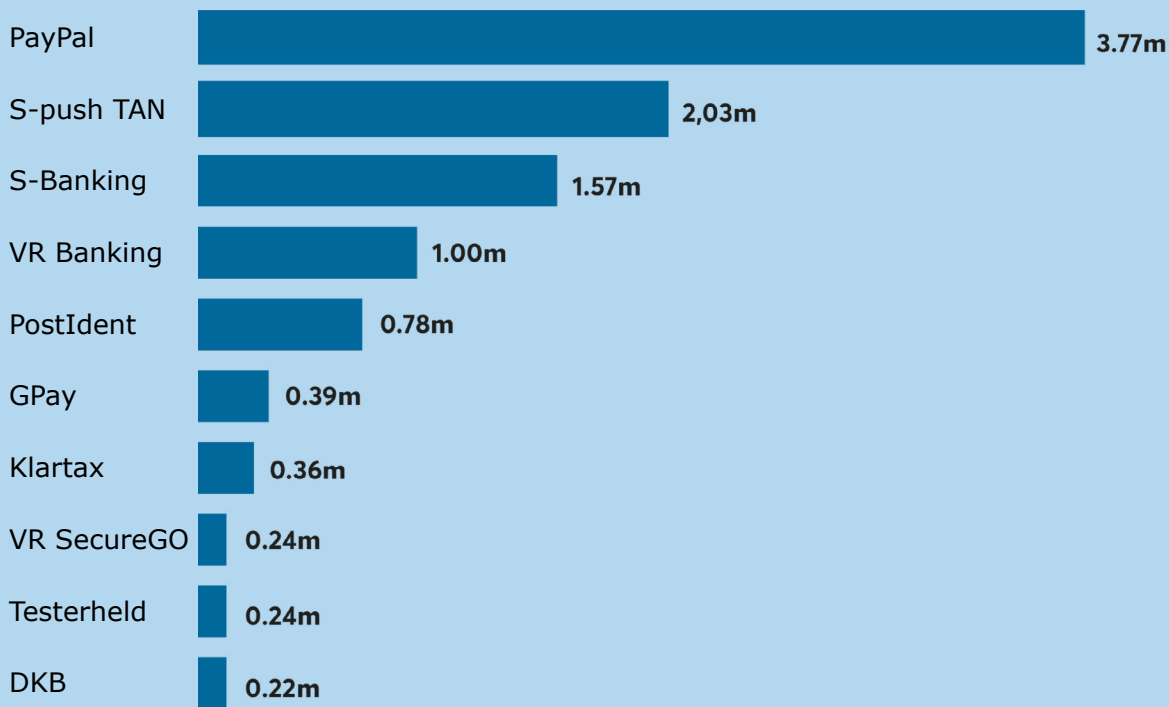


Source: Deutsches Aktieninstitut

According to FinTech Global, WealthTech apps were Germany's most downloaded FinTech services within H1 2022,¹⁴⁰ although not all apps listed in the graph below are "FinTech" apps per se.

138 Deutsches Aktieninstitut, "Deutschland und die Aktie Aktionärszahlen," 2021, p. 4
 139 Deutsches Aktieninstitut, "Deutschland und die Aktie Aktionärszahlen," 2021, p. 9
 140 Source: FinTech Global, [URL](#)

Top 10 German FinTech apps in 2022, as of 10th June (number of downloads)



Source: FinTech Global

The trend has been interrupted by the rising inflation, increasing interest rates and the crypto bear market that we witnessed in 2022.

Current WealthTech offers are not limited to neobrokers in Germany. UnitPlus, Othoz, Moonfare, Fincite, Lemon Markets, Fidelity, Smavesto, Gruenfin, and RIDE Capital have WealthTech offers on different levels.

1.2.3 Sustainable Banking

As financial service providers are determining their carbon footprint reduction and ESG agendas, many FinTechs (or RegTechs) started looking into ways to support these businesses in the past year.

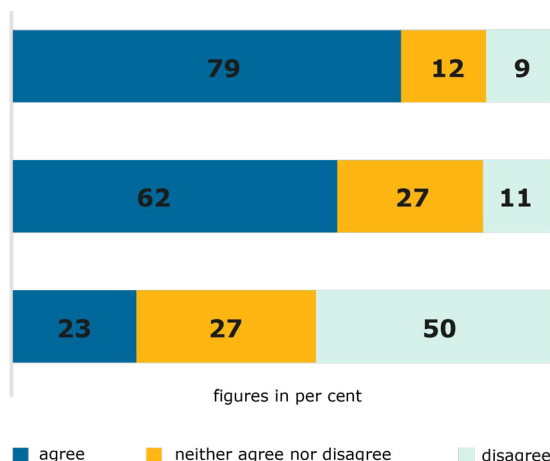
Other than SaaS solutions, the interest in sustainable financial products is increasing. According to a survey by BaFin, 62% of participants indicated a preference for financial companies with a strong ethical stance.¹⁴¹

Sustainable Finance

I believe that banks should check the ethics of companies before providing them with banking services.

I prefer to use financial companies that have a strong ethical stance.

It is more important for investors to choose companies that are making a profit than to choose companies that are minimising their impact on the environment.



Source: BaFin

141 BaFin, "Survey of Adult Financial Literacy Competencies in Germany 2019," 05.22, p. 9

Although public interest points towards greener finance, the adoption speed does not match the statements, indicating that the answers might be calculated (i.e., related to perceptions of self-image). The fact that Hamburg-based sustainable neobank Tomorrow has still around [125,000 customers](#) yet shows that customers prefer familiarity over sustainability.

Other sustainable or ethical banking and investment product offers include Triodos Bank, Gruenfin, GLS, insha, Ethikbank, and Umweltbank.

Unlike the web3 and WealthTech trends, the sustainability trend is likely to stick more as it is independent of economic developments and expected to become a part of the compliance budgets of all financial players in the coming years. BaFin also expects the trend to accelerate in the following years; *"In future, every private investor will not only need to have a clear idea of their own risk*

*tolerance but also whether, for example, they prefer to buy stocks and shares in a conventional fund or a fund that is classified as sustainable. The background to this is that, according to the European Commission's action plan on financing sustainable growth of March 2018, when providing advice, investment advisors are soon to be obliged to ask whether a consumer is interested in sustainable financial products. The investment advisor can then factor this preference in when they select products and assess those products' suitability for the customer."*¹⁴²

Deutsche Bank's recent carbon footprint target announcement aligns with BaFin's predictions. According to the media release,¹⁴³ Deutsche Bank aims net zero aligned targets for 2030 and 2050 in four carbon-intensive sectors. In addition, the German bank intends to reduce the number of financed emissions significantly by 2030.

Although the FinTech trend predictions of 2022, including sustainability, embedded finance, and BaaS, are likely to extend to 2023, recent economic and social developments and the FTX collapse will impact the trends as a whole. Such developments will probably influence consumer priorities and FinTech-related decisions (e.g., less WealthTech, more saving products). Detailed information about consumer behavior, FinTech product, and start-up management direction changes can be found in the following chapters.

1.3 External Developments Influencing the Market and Current Market Trends

The German market focus shifts along key economic and political developments and the events from the past three years have had a significant impact.

1.3.1 Brexit

January 2023 will mark the third anniversary of the UK leaving the European Union after 47 years of membership ("Brexit"). Following months of uncertainty, Brexit changed the dynamics of the European FinTech ecosystem for good.

Brexit's most significant impact was its direct influence on compliance requirements and costs. Britain not being a part of the European passporting scheme after Brexit, FinTechs and banks with international activities had to restructure their cross-border strategies. Several FinTechs decided to leave the UK market, and the remaining ones had to endure economic burdens due to licensing requirements, talent loss, and the complexity around data processing. Brexit-related compliance costs for continental European companies changed IT priorities for companies that decided to stay in the British market and caused delays and operational complications.

¹⁴² BaFin, "Survey of Adult Financial Literacy Competencies in Germany 2019," 05.22, p. 9

¹⁴³ Source: Deutsche Bank, [URL](#)

Brexit brought Germany closer to the FinTech championship, and this effect continues to this day. As cross-border FinTechs had to find a new hub to serve EU customers following Brexit, a majority decided to relocate to Germany, specifically to Berlin and Frankfurt. In this context, many stakeholders consider the rapid growth of Germany's FinTech sector as a sign of Germany replacing the UK in the ecosystem game.

Although Germany's BaFin approach is different from the FCA in terms of prioritization (investor protection-centric vs. innovation-centric), regulators and politicians have been making active attempts to turn Germany into a well-oiled FinTech machine.

1.3.2 Post-Pandemic Market Developments

According to Deutsche Start-up Monitor, most German FinTechs were negatively impacted by the Covid-19 pandemic. Although some FinTechs became more resilient after the pandemic, the extended crises shortened the runway for some of them.¹⁴⁴

Research by Dealroom, dated March 2020,¹⁴⁵ revealed that the pandemic created immediate cash flow issues for many German start-ups, which made them very dependent on foreign venture capital investors.

On the other hand, like all crises, the pandemic created unique opportunities. The Covid-19 pandemic necessitated an accelerated shift toward remote financial services, proving both challenging and rewarding for the FinTech industry globally.¹⁴⁶

The pandemic came with significant consumption shifts due both to the voluntary distancing of people and the introduction of lockdown measures that forced many non-essential businesses to shut down.¹⁴⁷ Covid-19 is a case in point, as it forced consumers to switch across consumption categories and favor e-commerce¹⁴⁸ and digital finance. Recent research reveals that online spending levels increased from 7.1% to 12.2% in Germany during the pandemic.¹⁴⁹

As mentioned earlier, Germany-based consumer mobile payment, digital banking adoption, (**chapter 2, section 1.2.3**), and investment appetite (**chapter 3, section 1.2.2**) changed with the pandemic, enriching the domestic digital banking and FinTech offers.

BaFin monitors the Covid-19 situation and the related developments seriously. Although a large portion of the pandemic-related measures ended as of the summer 2022,¹⁵⁰ the Covid-19 landing page of BaFin contains relevant information and is updated regularly.¹⁵¹

144 FinTech Global, 27.02.2022, [URL](#)

145 Dealroom.co, "Shortage of later stage venture capital in Germany: more acute due to Corona crisis," March 2020

146 World Bank Group, CCAF, WEF, "The Global COVID-19 FinTech Market Impact and Industry Resilience Study," 2022, p. 6

147 Grigoli, Francesco, Pugacheva, Evgenia, IMF, "Updating Inflation Weights in the UK and Germany during COVID-19," WP/22/204, 09.22, p. 20

148 Ibid

149 Alcedo, Joel, Alberto Cavallo, Bricklin Dwyer, Prachi Mishra, and Antonio Spilimbergo, "E-commerce during COVID: Stylized facts from 47 economies," NBER Working Paper No. 29729, 02.22, p. 6.

150 BaFin, "COVID-19 situation: BaFin information on new developments and key points," [URL](#)

151 See footnote no. 145

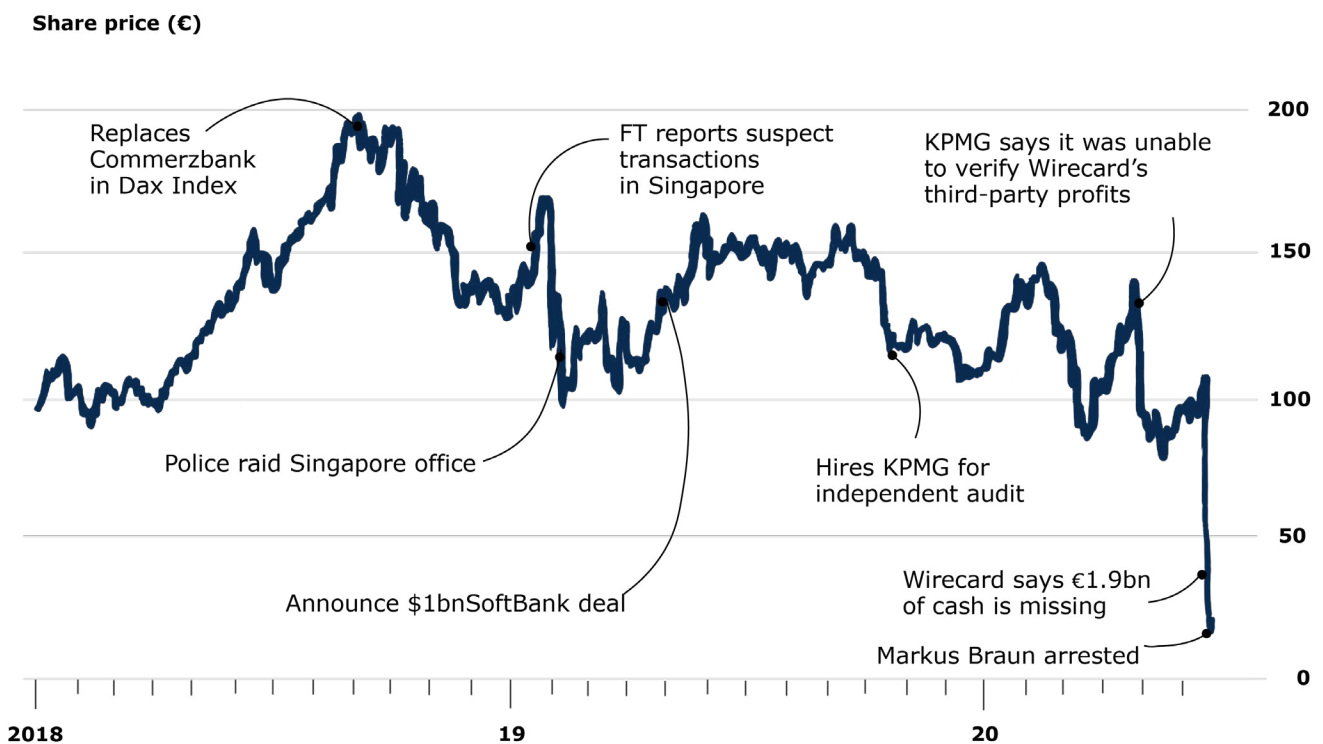
1.3.3 The Collapse of Wirecard

Founded in 1999, Wirecard AG quickly became the poster child for the German FinTech scene. The Munich-based payment processor provided infrastructure to many prominent FinTechs and corporates, including N26 (formerly known as "Number26"), Curve, Revolut, Atom, Allianz, KLM, Tencent, National Bank of Greece, and TUI, and became more valuable than many prominent German banks. As a result, the company entered the DAX in 2018, pushing Commerzbank out.

Wirecard, engaged in card issuing, payment processing, mobile payments, retail, and e-commerce support, additionally offered its standalone payment solution under the brand "Boon."

Following unsuccessful audit processes, the company announced that it was missing €1,9 B in cash and filed for insolvency in summer of 2020.¹⁵² The trajectories of the case revealed a complicated case of fraud, breach of trust, and accounting manipulation. While the criminal prosecution is still ongoing, the debates about the origin of the scandal speculate the German supervisory agencies' market protection instinct's enabling role in the process. The European Securities and Markets Authority (ESMA)'s Fast Track Peer Review¹⁵³ identified deficiencies that were revealed in the Wirecard case.

Wirecard's Share Price (€)



Source: Financial Times

152 Recommended reading for detailed information about the exact timeline of the events surrounding Wirecard's collapse: Financial Times, "Wirecard: the timeline," [URL](#)

153 European Securities and Markets Authority (ESMA), "ESMA Identifies Deficiencies In German Supervision Of Wirecard's Financial Reporting," [URL](#)

BaFin, to this day, is criticized for its potential part, in this case, as a supervisory agency. According to media outlets, BaFin Executive Director Béatrice Freiwald was being pressured to leave her supervisory duties,¹⁵⁴ and is required to leave her post.

The complicated events surrounding the insolvent FinTech impacted confidence in Germany as a financial center.¹⁵⁵ The new light changed the German financial sector for good, putting more strain on the FinTech start-ups and financial service players due to the lack of tolerance and the planned regulatory reforms.

The ecosystem was given a taste of the upcoming regulatory winter as early as the summer of 2020. In July 2020, Federal Finance Minister Olaf Scholz introduced an Action Plan by the Federal Government "to combat accounting fraud and to strengthen control over capital and financial markets."¹⁵⁶ The Action Plan¹⁵⁷ highlights its initial goal to "make the German system of auditing balance sheets and financial statements and corporate governance more effective, strengthen BaFin's holistic approach to supervision, and put international standards and European regulation in payment transactions to the test," through updated standards, regulations and mechanisms.

The key points of the Action Plan were vocalized through a new regulation called "Gesetz zur Stärkung der Finanzmarktintegrität (Finanzmarktintegritätsstärkungsgesetz)," FISG in short.¹⁵⁸ FISG entered into force on 01.07.2021 and will introduce the following changes in addition to strengthened audit and control standards:

- Balance sheet checks will become the sole responsibility of BaFin, allowing BaFin to approach capital market players directly and immediately.
- BaFin has received improved information rights as well as search and seizure rights.
- BaFin also has expanded its reach. Since the beginning of this year, BaFin can access outsourcing companies directly and impose fines, putting partner FinTechs and IT companies under the spotlight.
- As a part of the improved controls, BaFin experts will have the option to disguise themselves as consumers and to test user treatment and compliance.

FISG applies to listed companies and is expected to impose many changes to existing regulations including the payments and tax regulations, anti-money laundering prevention regulations, and the securities trading act.

The post-Wirecard era is anticipated to extend to FinTechs and payment companies, in addition to the improved supervision and control of listed companies.

N26 was one of the first recipients of the post-Wirecard treatment due to its connection with the institution and ongoing AML questions.¹⁵⁹ However, there seem to be no signs of Wirecard-related issues at N26.

Heidelberg-based payment service provider Unzer was another one of the recipients of the post-Wirecard closeup. Unzer's new customer onboarding was ordered to be halted on 28.07.22 due to "appropriate corporate management mechanisms and control mechanisms."¹⁶⁰ The company was fined €350,000 on 09.16.22.

154 Handelsblatt, "Bafin-Exekutivdirektorin Béatrice Freiwald muss gehen," 04.10.22, [URL](#)

155 BaFin, "Nach Wirecard: Mehr Kompetenzen für die BaFin," 15.06.21, [URL](#)

156 Ibid

157 Aktionsplan der Bundesregierung zur Bekämpfung von Bilanzbetrug und zur Stärkung der Kontrolle über Kapital- und Finanzmärkte," dated 06.10.22.

158 The drafts can be accessed through the Federal Ministry of Justice's website, [URL](#)

159 BaFin announced special measures for N26 on 05.10.21 due to risks to the organization's operational resilience. Accordingly, special risk mitigation measures are applicable, and special commissioners appointed by BaFin are involved with the bank's growth story. Additionally, N26's customer growth is reduced and limited to 50,000 per month. More information: BaFin, "N26 Bank GmbH: BaFin ordnet Wachstumsbeschränkung an und bestellt Sonderbeauftragten," 09.11.21, [URL](#)

160 BaFin, "Unzer E-Com GmbH: BaFin ordnet Neukundenverbot an und bestellt Sonderbeauftragten," 31.08.22, [URL](#)

Many anonymized and non-anonymized fines and sanctions were announced on the BaFin website after 2020 about FinTechs and financial service providers, showing that the Wirecard topic is a matter close to BaFin's heart.¹⁶¹

The ripples of the Wirecard insolvency are likely to continue for several years, mainly until the lawsuits are settled, and all the wrongdoings are revealed, impacting all financial service providers to some extent. Therefore, addressing the increased regulatory sensitivity in Germany must become a mission for FinTechs planning to enter the German market.¹⁶²

"I have the impression that regulation becomes more challenging than ever since the Wirecard scandal by BaFin changing their course. This could lead to some players rather looking into options besides Germany, which does not foster Germany as an innovative place for FinTechs."

Anonymous Contextual Solutions & FinTech Consult "German FinTech Market Survey" Participant

161 A full list of sanctions can be found on the BaFin website, [URL](#)

162 Former Wirecard CEO Markus Braun has been in police custody since 2020 and will stand trial later in 2022, according to media sources, [URL](#)

1.3.4 Russian Invasion and the Economic Turmoil

1.3.4.1 Inflation and Recession Atmosphere

Russia's invasion of Ukraine in February 2022 came out of nowhere for many and created a significant setback to the steady post-Corona recovery phase. The invasion's impact on energy prices converted into higher inflation, especially for gas-dependent states like Germany. According to Destatis, the inflation rate in Germany, stood at +10.4% in October 2022, an all-time high since the German reunification of 1990.¹⁶³

According to the German Bundesbank, "unfavorable developments in the gas market" will likely pressure German manufacturers in the upcoming quarters. An additional challenge seems to be around the skilled worker topic. All in all, if the manufacturer's price increases can't be justified, some are at risk of insolvency, which is likely to impact the market end-to-end.

According to IMF's World Economic Outlook, the German economy might shrink by 0.3% in 2023 (as opposed to an earlier prediction of 0.8% growth).

*"Cold temperatures or insufficient gas demand compression this fall could force energy rationing during the winter in Germany, Europe's largest economy, with drastic effects for industry, weighing heavily on the euro area growth outlook and with potential for negative cross-border spillover effects. Of course, commodity prices might also decline - perhaps if the global downturn is more severe than expected - something that would have an adverse impact on exporting countries."*¹⁶⁴

In Q3, Germany displayed 0.3% GDP growth according to Destatis, which is a sizeable buffer, even if Q4 2022 turns out to be negative. Nevertheless, thinking pessimistically, a turnover according to IMF's predictions will impact more than the prices and the customer interest and appetite to build and retain wealth (digitally). If the increase continues, the crisis is expected to spiral toward wages and labor costs, weighing heavily on SMEs and start-ups.

1.3.4.2 Layoffs and Valuation Downturn

The drastic valuation downturns and ensuing economic turmoil, have pressured FinTechs to adopt cost-cutting measures. Consequently, layoffs hit the tech world and quickly spread to Germany in 2022. Some of the most significant layoffs of the German FinTech ecosystem were reported as follows:

- Berlin-based Freelancer and SME banking provider Kontist was one of the first to join the layoff spree in May 2022, discharging 25% of the company.¹⁶⁵
- German neobroker Trade Republic terminated 700 of its employees in June 2022.¹⁶⁶
- Solaris dismissed 10% of its employees in September 2021 due to profitability concerns.¹⁶⁷

- Credit card provider Moss let go of 70 employees,¹⁶⁸ equaling 15% of its workforce, in September 2022 based on "significant changes in the economic environment."
- Nuri laid off 20% of its workforce in June 2022. Due to the insolvency¹⁶⁹ the whole team was dismissed in October 2022.
- Most recently, Elinvar was reported¹⁷⁰ to terminate the relationship with one-third of its employees in October 2022 after fresh funding.

Other significant mass layoff announcements impacting the global workforce of companies like Klarna, Bitpanda, and Delivery Hero also impacted the Germany-based FinTech workforce as well.

¹⁶³ According to Destatis (13.10.22). Measured as the year-on-year change in the consumer price index (CPI), [URL](#)

¹⁶⁴ IMF, "World Economic Outlook, Countering the Cost-of-Living Crisis," 10.22, p. 19

¹⁶⁵ Finance Forward, [URL](#)

¹⁶⁶ Finance Forward, [URL](#)

¹⁶⁷ Gruenderszene, [URL](#)

¹⁶⁸ Finance Forward, [URL](#)

¹⁶⁹ Nuri (ex-Bitwala) filed for insolvency in August 2022 and shut down its operations as of 19.10.22

¹⁷⁰ Finance Forward, [URL](#)

According to German law, employers with a headcount of 20 and more are required to notify the Federal Employment Agency about sizeable layoffs. As a rule, the lack of this notification or the inclusion of the required information¹⁷¹ will lead to the termination notification being invalid according to Protection against Dismissal Act (Kündigungsschutzgesetz - KSchG). However, a recent Federal Labour Court decision¹⁷² has concluded that the lack of required information per the Protection against Dismissal Act does not result in the invalidity of the layoff notification.

1.3.5 Financial Resilience

The German financial sector recovered from COVID quickly and strongly. According to IMF, since the pandemic, the German banking sector has expanded its assets further, financed mainly by wholesale funding, amid substantial fiscal and monetary support for the economy.¹⁷³

Between December 2019 and December 2021, the total assets of German banks increased by 10.5 percent (€0.9 trillion, equivalent to 24 percent of annual GDP).

About two-thirds of this increase (€560 B) was funded by interbank liabilities, including towards the ECB; customer deposits also increased by a lesser extent (€365 B). As a result, bank lending rose 5.4 percent in real terms. Over half of the loan increase was driven by savings and cooperative banks, and a significant share of the credit went to housing mortgages (7.1 percent y-o-y to September 2021).

Source: IMF

Nonetheless, a second and more sudden crisis is at the door, and the financial sector might be impacted by it due to cost increases.

*“Immediate risks to Germany’s financial stability of Russia’s invasion of Ukraine appear to be manageable due to the banks’ limited direct exposures to Russia. However, risks associated with the economic fallout could impact some individual financial institutions, nonperforming loans, and house prices,”*¹⁷⁴ stated IMF already in August 2022.

Regardless of the pessimistic predictions, Germany is among the eleven countries with a AAA S&P rating, together with the Netherlands.

Germany’s financial service providers appear to be resilient, according to FSAP solvency and liquidity stress tests.¹⁷⁵ However, “extended supply chain disruptions and de-anchoring of inflation expectations in the U.S. and advanced Europe with a scarcity of gas and oil” seem to threaten the stability, according to the IMF. Challenges to financial service resilience have the potential to impact the outsourcing and dependent (e.g., BaaS) partners of German financial institutions. Therefore, foreign FinTechs are advised to think conservatively and draft emergency concept protocols before committing to a partnership with local financial service providers.

171 According to KSchG Section 17, the relevant information includes the reasons for the planned dismissals, the affected groups and their numbers, the dismissal period and the criteria for dismissals.

172 Bundesarbeitsgericht, Case No. 2 AZR 467/21, [URL](#)

173 IMF, “Germany Financial Sector Assessment Program Technical Note—Stress Testing, Interconnectedness, And Risk Analysis,” IMF Country Report No. 22/272, 04.08.22, p. 9

174 IMF, “Germany Financial Sector Assessment Program Technical Note—Stress Testing, Interconnectedness, And Risk Analysis,” IMF Country Report No. 22/272, 04.08.22, p. 7

175 See footnote no. 169

1.3.6 FinTech Specific Impact of the Crisis

Although we have been observing a positive digital adoption trend and the development of new FinTech-friendly consumer habits, the economic distress and shock might reverse or hamper the positive adoption, depending on how the winter goes.

Inflation and the increasing POS and card costs might push small German merchants back to their old ways of accepting cash or enforcing baseless minimum card payment limits. On the other hand, with significant operational cost increases, even sizeable German merchants might be inspired to resort to digital payments less and less to minimize costs. Or flipping the coin, merchants might want to increase unit prices for card payments or demand additional fees, making cash payments more attractive to consumers.

The same is applicable to e-commerce payments, and such practices are likely to boost Germany's beloved invoice payments over card payments.

Payment-related challenges are not limited to purchase fees. For instance, most cards were offered for free in Germany until recently. However, as many banks and FinTechs started requesting card and subscription fees from their customers in the past months, including DKB with the default card offer, customers might focus on

the most beneficial card products and cancel out the rest to minimize their costs.

Cash deposits are also not free for neobanks, or some, like Wise, do not even accept top-ups. Specific consumer types like expats, who use neobanks as their house bank, might feel compelled to keep cash at home to avoid cash deposit costs.

As economic developments threaten the FinTech progress in Germany, PayTech start-ups are recommended to keep an eye on their merchants, find cost optimization methods, and encourage consumers with cash back, referral, and similar initiatives.

Similar risks might challenge the adoption of non-payment products or force customers to drop additional FinTech products, focusing on the essentials. Therefore, new players entering the market should focus on current needs and provide essential financial services instead of "optional" and "luxury."

1.3.7 Other Noteworthy Developments of 2022

1.3.7.1 German Government's Fresh Start-up Strategy

German Government published a detailed start-up strategy in July 2022, announcing an investment of €30 B by 2030 to support clean innovation and accelerate Europe's green transition.¹⁷⁶

According to the strategy document, start-ups have "*special significance for business, science, and society because they fuel competition and the spirit of innovation.*" The German Government expects the start-ups to create 974,000 jobs by 2030 (an increase from 415,000 in 2020) in Germany.¹⁷⁷

In an attempt to fuel the start-up sector in Germany, the Government intends to work on the following areas until 2025;

- Strengthening funding opportunities for start-ups, especially in terms of large-volume financing,
- Making it easier for start-ups to attract talent through education and immigration,
- Digitalizing the company founding process, including the notarial procedures, and decreasing the process to 24 hours,
- Strengthening diversity and increasing female and immigrant start-up founders,
- Facilitating start-up spin-offs from the science sector,
- Adopting a social entrepreneurship framework,
- Simplifying and digitalizing public procurement processes,
- Providing access to data for start-ups,
- Strengthening physical laboratories for R&D and giving access to start-ups,
- Placing start-ups at the center of attention by promoting networking and connections.

Although the Government strategy is sector agnostic, fulfilling these strategies will likely make start-up founding, operations, funding, and growth operations in Germany faster, cleaner, cheaper, and more innovation-friendly. Additionally, Dutch start-ups that can contribute to this mission via their services will likely have an easier time establishing their place in the German market.

¹⁷⁶ BMWK, "Die Start-up Strategie der Bundesregierung," 07.22.

¹⁷⁷ BMWK, "Die Start-up Strategie der Bundesregierung," 07.22, p. 4

1.3.7.2 Nuri's Insolvency

One of the noteworthy developments of 2022 for the German FinTech ecosystem was no doubt the crypto bank Nuri (ex-Bitwala) shutting down its operations.



Source: Nuri

Founded in 2015, Nuri had the mission to combine serious banking with cryptocurrencies. According to Handelsblatt,¹⁷⁸ the blockchain banking provider had access to 500,000 customers and managed assets of €100 M as of April 2022 in partnership with Solaris.

However, the crypto winter hit Nuri as well, together with the insolvency of its significant partner Celsius, and on 09.08.22, the company started insolvency proceedings due to its inability to pay.

*"Various negative developments in the crypto markets earlier this year, including sharp price drops, the Luna/Terra protocol implosion, and the bankruptcy of Celsius and other major crypto hedge funds, have resulted in a crypto bear market. This challenging environment has had a severe impact on Nuri's business development. We filed for insolvency to prevent our company from becoming permanently insolvent."*¹⁷⁹

Following the insolvency, the company entered into acquisition discussions with various interested parties. However, it shut down instead and announced this decision on 18.10.22.

In a public letter,¹⁸⁰ Nuri's CEO Kristina Walcker-Mayer explained the decision with the following statement *"This year, the challenges have become insuperable due to the tough economic & political environment of the past months, which kept us from raising new funds or finding an acquirer. On top, the insolvency of one of our main business partners (Celsius) worsened the situation significantly and put us over the edge. As a result, Nuri had to file for temporary insolvency in August this year."* The existing customers of Nuri were directed to Vivid Money, another Solaris partner.

Payment and Banking, one of Germany's go-to FinTech media channels, explains the reason behind the "finale" with Nuri's strategy of prioritizing PR over product development.¹⁸¹ In fact, it was recently revealed that only 200,000 customers passed Nuri's initial identification process, instead of 500,000.¹⁸²

Regardless of the small incidents that created this result for Nuri, the downfall of one of Germany's first and most ambitious crypto FinTechs created a shockwave in the ecosystem, leading to speculations about other crypto business models being at risk as well.

¹⁷⁸ Handelsblatt, [URL](#)

¹⁷⁹ Nuri, [URL](#)

¹⁸⁰ Nuri, "Letter from our CEO Kristina," 18.10.22, [URL](#)

¹⁸¹ Payment & Banking, "Licht aus bei Nuri – was sind die Gründe und Lehren daraus," 18.10.22, [URL](#)

¹⁸² finanz-szene, [URL](#)

1.4 Investment Trends in Germany and Fundraising in 2022

The German FinTech ecosystem had a promising start to the year. 2020's total investment amount of €1,3 B more than quadrupled in 2021 to €6 B.¹⁸³ H1 2022 looked promising, with almost €3 B, giving the market the illusion that it would continue this way and the total reach would end well above €5 B at the year-end. In the meantime, analysts have readjusted their projections¹⁸⁴ and cap this year at \$3.7 B. Please refer to **chapter 1** for more information.

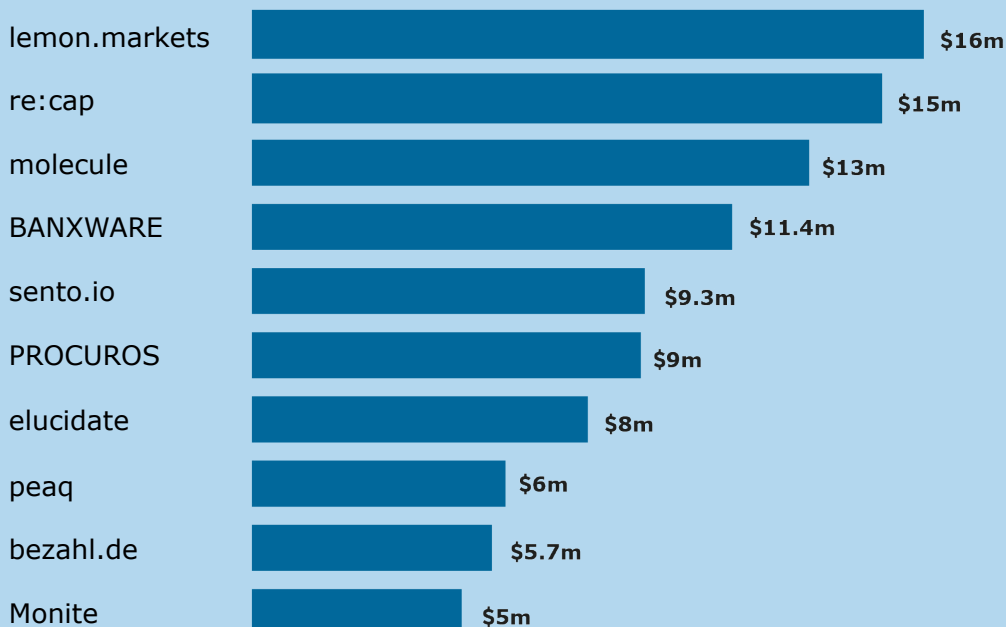
According to the Q2 predictions of FinTech Global, the total investment amount was expected to reach \$4.2 B.¹⁸⁵ However, current projections¹⁸⁶ are readjusted and cap this year at \$3.7 B. Accordingly, deal activity in Germany is also expected to drop by 15%, which reported to be better than in the UK (24%). Berlin was reported to outshine other local hubs in Germany, holding 43% of the 51 deals made in Germany, followed by Munich with seven deals. The most noteworthy rounds confirm the predicted market trends. First, WealthTech and embedded finance took over the H1, amid the cryptocurrency momentum loss.

In Q1, Vivid Money raised €100 M. Starting as an N26 competitor, Vivid Money currently offers trading features and brought its valuation to €775 M after the Series C fundraising in February. Vivid Money was followed by the digital insurance and pension platform Xempus from Munich, led by Goldman Sachs Asset Management.

In Q2, the neobroker Trade Republic dominated the local deals. The German Robinhood equivalent raised Series C with an additional €250 M at a €5 B valuation in June. Trade Republic has stocks, ETFs, derivatives, and crypto in its portfolio and has reached more than a million customers across Europe.

One InsurTech deal stamped Q3. In July, WeFox raised \$400 M in a series D round, bringing its value to \$4.5 B. According to CB Insights,¹⁸⁷ the WeFox deal ranked among the top three global FinTech equity deals of 2022 and the top Series D deal in Q3. In addition, the German dental InsurTech Ottonova was listed in the top five E+ deals of Q3 with \$34 M.

Top 10 FinTech seed deals in Germany, H1 2022



Source: FinTech Global

Aside from the major rounds, there were significant seed rounds, including Lemon Markets (\$16 M), recap (\$15 M), Molecule (\$13 M), Banxware (\$11.4 M), and sento.io (\$9.3 M) in the top five seed deals.

¹⁸³ \$6.4 B according to Fintech Global.

¹⁸⁴ FinTech Global

¹⁸⁵ FinTech Global (04.09.22)

¹⁸⁶ FinTech Global (12.10.22)

¹⁸⁷ CB Insights, "State of FinTech Q3 2022", p. 9

"The German start-up ecosystem, in particular the FinTech space, has progressed a lot in the last few years. We have seen innovative business models emerge particularly in a number of areas including embedded finance, payments, and B2B businesses. Despite the recent slowdown in line with the global decline in VC investing, the ecosystem continued to grow rapidly during this time. With a deep bench of talent and continuous investor appetite, I expect to see great businesses come out of the country in the years to come."



Serhat Aydogdu

Investor at D4Ventures

1.5 Fundraising Then and Now

The recent market developments haven't broken the entrepreneurial will, but the market slowdown is visible as investors prioritize their portfolio companies and entrepreneurs with track records. We can see the German caution culture take over at this point, as many (institutional and angel) investors want to see the complete economic and pandemic-related picture before engaging with new projects due to unpredictability. Consequently, long-term investment plans are exchanged with short-term tactics, and investors want to keep the cash close until their portfolio companies can reach a break-even point at the very least.

It is harder for first-time entrepreneurs, pre-seed, and early-stage companies to raise funds at the moment, and the barriers are likely to increase as the recession becomes more visible. As a result, start-ups try to extend their runways via bootstrapping, layoffs, and other belt-tightening measures, as some avoid raising funds when valuations are so low, and some, on the other hand, can't.

"The deterioration of the macroeconomic environment affects Germans FinTechs strongly. Access to financing is becoming more difficult and valuations are declining. At the same time, Germany's FinTech ecosystem comes with a high development potential. While traditional banks still enjoy a leap of faith, end consumers are more and more open to FinTechs. FinTechs will gain in relevance and will increasingly shape the financial ecosystem due to their technological advantage, paving the way for faster, cheaper and better Financial Services."



Leonie Schilling

Investment Associate at coparion

Market participants surveyed during this study indicate hardships during this year's fundraising. According to our survey,¹⁸⁸ fundraising was taking longer, and it was hard to "settle a secure relationship." In addition, some participants indicated the importance of demonstrating seed-stage revenue generation, while several admitted to looking for alternatives abroad.

¹⁸⁸ More information about the survey can be found under "Methodology."

1.6 Looking into the Crystal Ball: Investment and Strategy Trends That are Likely to Shape 2023

Due to the lack of over-the-top and “cheap” financing options, domestic FinTechs are focusing on short-term bootstrapping solutions, including but not limited to:

- Freezing new hire processes,
- Reducing marketing and PR budgets,
- Keeping the current cashflow and postponing fundraising until valuations improve,
- Restructuring the business models and looking for new sources of revenue,
- Changing expansion strategies,
- Focusing on retention and user satisfaction over new user acquisition, and
- Focusing on saving and survival instead of growth.

On the other hand, non-European FinTech companies are using this “quiet” term as an opportunity to take the leap and enter the German market. According to FinTechs from non-EU origins, Germany provides the soft cushion these businesses need after volatile economies (in a relative sense), and local start-ups interlude strategies are giving them the perfect competitive leverage. All in all, the local competition is likely to heat up next year, especially in the payment and retail banking verticals, with foreign FinTechs coming to the German market, eyeballing the thrones of German FinTechs.

The FinTechs participating in the Contextual Solutions & FinTech Consult survey agree on the immediate psychological impact of the crisis on the market more than an economic one. They expect the fear, shock, and “media manipulation” to result in risk aversion, profitability pressure, consolidation, longer sales cycles for B2B companies, and talent shortages for the ecosystem. In 2023, consumers are expected to act more conservatively and change their spending behaviors.

On the other hand, some participants expect the crisis to “enable new kinds of products that were not possible during the negative interest rate environment” and to push the deposit products further.

As a precaution, the majority of the surveyed FinTechs indicate cash-flow measures, including cost cuts (general cuts, performance marketing cuts), hiring freezes, finding new revenue streams, and preserving the runway. Although some FinTechs haven’t taken specific precautions to address the upcoming challenges, they plan to watch the market closely and create a concrete plan in the next quarter through workshops and stakeholder feedback. Last but not least, some FinTechs plan to look abroad for new investors, while one indicated taking active steps for being acquired by a corporate.

2 German Market in Practice

2.1 Overview

The German market is peculiar and traditional for a range of historical and cultural reasons. Consequently, just like in other markets, respecting this market and its pace is instrumental to success.

Although the German market is tough to conquer, consumer suspicion evolves into bulletproof loyalty once the sweet spot is found. Additionally, getting the necessary regulatory requirements and having success in the German market is a stamp of approval everywhere else. All in all, expanding to Germany can make or break a start-up, and therefore, FinTech start-ups should carefully strategize their expansion plans.

This next section is dedicated to explaining the practical side of the German market. After a quick examination of the funding options in Germany, success factors in the German market and internalization strategies based on market and stakeholder insights, and observations will be discussed.

2.2 Start-up Funding in Germany

For start-ups and new businesses, various forms of funding, including debt funding, equity funding, and hybrid funding options, are available in Germany.

Fast-paced companies, such as FinTech start-ups, rely on equity funding due to accessibility and the sheer size of funds they need, as tech and regulatory prerequisites require big tickets. Additionally, debt financing is available mainly for more mature companies or only in small amounts and with high due diligence requirements for early-stage companies, making it less attractive.

Available market data reveals that the early-stage funding depends on domestic investors and foreign investors do not enter the scene until later. This is especially true for late-stage venture capital in Germany. According to Dealroom, the massive influx of foreign venture capital results in the share of domestic capital being the lowest compared to other European ecosystems.

Foreign investors, especially the ones from the USA and Asia, setting the tone in Germany is a cause for concern, especially in terms of "technology sovereignty, innovative strength and job security in Germany," according to the German Government,¹⁸⁹ which is due for a change.

However, the recent rounds show a positive spin for German venture capital. Two German investors, Global Founders Capital and Cherry Ventures, were included in CB Insight's top European investors for Q3 2022.¹⁹⁰

Europe: Top investors by company count in Q3'22

	Investor	Company Count	Investor Group	Country
1	Anthemis	7	VC	United Kingdom
1	Speendinvest	7	VC	Austria
3	Fabric Ventures	6	VC	United Kingdom
3	Global Founders Capital	6	VC	Germany
5	Index Ventures	5	VC	United Kingdom
6	Cherry Ventures	4	VC	Germany
6	Phonix Court Group	4	VC	United Kingdom
6	Seedcamp	4	VC	United Kingdom

Source: CB Insights, "State of FinTech Q3 2022"

Although less popular than five to ten years ago, crowdfunding options still exist for pre-seed and seed companies.

Subsidies provided by the EU and numerous German institutions are also attractive for foreign and local entrepreneurs. Some of the more popular local options are outlined below.

189 BMWK, "Die Start-up Strategie der Bundesregierung," 07.22, p. 10

190 CB Insights, "State of FinTech Q3 2022," p. 131

2.2.1 EXIST Start-up Grant and the Exist Research Transfer Program

EXIST¹⁹¹ is an initiative by the German Federal Ministry for Economic Affairs and Climate Action (BMWK) for university-based business start-ups. The program has been actively running since 1998 and aims at improving the entrepreneurial environment at universities and research institutes. It aims to increase the number and success of technology and knowledge-based business start-ups.

This grant is eligible for early-stage start-ups that haven't yet established a corporation. The most important precondition of the grant is that the planned business idea must be an innovative technology-oriented or knowledge-based product with significant unique selling points and good prospects of economic success.

The grant supports a maximum of three team members for twelve months. The team should consist of scientists, university graduates, former academic staff (up to five years after the degree or drop out), and students who have completed at least half of their studies. Foreign degrees are also accepted after a case-by-case evaluation, however serial entrepreneurs are not. The program supports university graduates, scientists as well as students to this end in preparing their technology and knowledge-based start-ups. It is ideal for companies in the idea validation stage.

2.2.2 The Micro-Mezzanine Fund

The Micro-Mezzanine Fund Germany¹⁹² is a diversity initiative by the Federal Ministry for Economic Affairs and Energy, targeting small and young companies and start-ups, particularly companies that were founded by unemployed people, are run by women, by people with a migration background. In addition, social enterprises operating commercially and companies focusing on environmentally compatible production are also eligible for the program. The funding is provided as dormant investment by the SME venture capital companies of the respective Federal Land in which the investment is made. It amounts to up to €50,000 with a term of ten years, and €150,000 for target group companies. The dormant investment may be used for all corporate management purposes. It must be repaid from the seventh year in three equalannual installments. Applications can be submitted via the SME venture capital company of the respective Land.¹⁹³

2.2.3 INVEST

INVEST is an initiative of the Federal Ministry of Economics and Climate Protection and brings together start-ups and private investors "who believe in bold ideas." Small, innovative companies less than seven years old, with headquarters in the EEA and at least one branch in Germany that is entered in the commercial register or a permanent establishment in Germany that is entered in the trade register, with less than fifty employees and annual sales or balance sheet of €10 M are eligible. The minimum investment amount is €25,000 for the participating investors. The Government plans to relaunch the program as of 01.01.23.¹⁹⁴

Various additional funding and grant options are available for start-ups founded or operating in Germany. A complete list of all Federal start-up loans can be found under the [funding database](#) ("Förderdatenbank").

2.3 Success Factors in the German Market

2.3.1 Overview

As mentioned in the earlier chapters, Europe's industrial leader has a particular consumer and business culture. Thereby, success in the domestic market depends on respecting the culture, customs and managing expectations.

¹⁹¹ BMWK, [URL](#)

¹⁹² BMWK, [URL](#)

¹⁹³ Ibid

¹⁹⁴ BMWK, "Die Start-up Strategie der Bundesregierung," 07.22, p. 9

2.3.2 Trust and Endorsement

German business culture has a strong trust and endorsement emphasis. The companies operating in Germany, especially the ones that do not have a track record in Germany or cannot demonstrate authority (e.g., due to the company or the founders' seniority) should try to build trust using different methods.

- For B2B start-ups, using pilot customers during the reputation-building phase can accelerate the sales cycle.
- For B2C start-ups extended warranties and revocation rights might relieve the customers off their suspicion.
- Also, foreign FinTechs might benefit from working with local institutions, consultancies, adding German bankers or influential figures to their boards and using German correspondence addresses and URLs to demonstrate "integration."
- Lastly, investing in local tech certifications, TÜV, Stiftung Warentest approvals, and other applicable references will increase confidence in the brand.

2.3.3 Selection of Partners

The choice of partner also plays an important role when creating trust using partners. As technical partners and BaaS providers that the foreign FinTechs work with have relationships with customers, selecting trustworthy and local partners could increase the trustworthiness of the FinTech. Using non-DACH partners or applying to banking or e-money license from Luxembourg, Estonia or Lithuania can push away some old-school customers, so a detailed analysis of potential partners before entering Germany could speed up things afterward.

2.3.4 Network

A society that pays so much attention to credibility, endorsement and referrals is likely to pay attention whether the new business is a part of a community or not. Therefore, non-German FinTechs are advised to participate in local initiatives, associations, and lobbying opportunities to learn, grow, and prove themselves.

- Association of German Chambers of Industry and Commerce (Deutscher Industrie- und Handelskammertag) brings together entrepreneurs and businesses from various economic sectors, to contribute to the regional economy. All German companies are a part of their [regional IHK](#), yet, FinTech start-ups can become members of local chapters and sub-groups (e.g., Start-up, Finance, etc.) to utilize the power of the community.
- Association of German Banks (Bankenverband) represents more than 200 private commercial banks and eleven member associations and is heavily involved in industry development, regulations, and lobbying. Bankenverband recently started accepting [extraordinary FinTech members](#), who can participate in lobbying and networking activities. This membership is a great opportunity for foreign FinTechs to come together with local banks, address their challenges and contribute to lawmaking processes.
- Bitkom is a digital transformation enabler association that hosts over 2,000 members in the IT, telco, internet, and media sectors. Bitkom [members benefit](#) from cross networking as well as lobbying, education and consultancy services.
- Der Mittelstand, BVMW e.V. is the network for German SMEs and represents political interests alongside promoting networking opportunities. FinTechs needing SME feedback or customers could benefit from BVMW's events, content and introduction opportunities by [becoming a member](#).

- [The Berlin Group](#) is well known among open banking players due to their contribution to payment interoperability standards and harmonization. The Group is open for participation to any market supply-side bank (ASPSP), banking association, payment association, payment scheme and interbank processor active in the SEPA payment industry. Participating in the Berlin Group would give payment start-ups an edge and allow them to learn developments firsthand.
- Federal Ministry of Finance (Bundesministerium der Finanzen) runs Digital Finance Forum and FinTech Council (FinTechRat) initiatives to “shape the future of finance in Germany,” together with the NextGen players. The [initiative](#) includes different expert groups and roundtable sessions.
- FinTech start-ups in need of a less traditional network can join start-up associations, the biggest being [Startupverband](#).
- [Digital Hub Initiative \(De:hub\)](#) aims to create partnerships by connecting SMEs and corporations with innovators and creators. The platform allows corporates to search for specific start-ups or products and provides visibility to start-ups. In addition, eligible start-ups can use De:hub membership as a matchmaking leverage to partner with corporates and SMEs.
- Awards and pitching competitions, including the IHK competitions or the [FinTech Germany Award](#) nominations increase visibility for newcomers.
- Last but not least, FinTech start-ups are encouraged to filter and approach [regional and topic-specific associations](#) and [institutions](#) or lawyers and tax advisors to learn more about the sectors, players and get introductions and form partnerships.

2.3.5 Creating Transparency

German bluntness translates into the business culture as customers prefer honesty and transparency over sugar coating. As German consumers are diligent and detail oriented, a basic German translation of the legalese will not suffice. Foreign FinTech companies are advised to pay additional attention to their consumer facing documents, FAQs and explain the processes (e.g., onboarding, account opening, ROIs, etc.) in detail. In addition, topics close to German consumers heart, such as data privacy and cybersecurity, pricing and taxation should be highlighted and clarified.

2.3.6 Addressing Pragmatism

German culture is down-to-earth, and most customers do not express status via purchase and brand names. Thus, when a decision has to be made about a feature, UI or additional services, preferring the practical and quality alternative over the luxury one would make sense. However, when additional fees are involved, pricing-sensitive consumers would want to feel like they are getting their money’s worth, so explaining the nature of the additional fees and what customers will get in return would be helpful.

2.3.7 Readiness

The diligent German business culture expects its counterparts to pay attention to deadlines, details and be ready when the time comes. Whether the foreign FinTech is trying to set up the local GmbH or applying for regulatory license, 100% readiness will be expected from the start-up. This factor is especially true in the economic downturn and post-Wirecard era, where institutions are observed to be more risk-averse and thorough with due diligence and KYB processes. Planning with time buffers is a sensible measure.

2.3.8 Localization

Localized products and services will have greater appeal, and there are multiple ways to address consumers:

- **Paying Attention to Local Dialects:** Paying attention to local dialects when planning a campaign or drafting a copy will not only fulfill cultural expectations but would also create competitive advantage.
- **Considering the Differences Between East and West:** FinTech start-ups should additionally make an effort to bond with the local culture, as all states have different cultural codes. The financial pattern differences between the customers in the East and the West should be considered.
- **Local IBANs:** Recurring experience in the German market shows that German consumers are likely to trust local IBANs, which is why many BaaS providers started investing in a local IBAN infrastructure in the last years. A potential sensitivity must be considered when entering the market via European passporting.
- **German Customer Support and Correspondence Addresses:** German customers interact frequently with the service providers and therefore having native German speakers in the customer support team would look credible and can save the start-up negative Trustpilot reviews. As more traditional consumers still prefer to communicate in writing, having a local postbox instead of a foreign (e.g., Dutch or French) correspondence address can institute trust, especially when there are no offices in Germany.
- **Trusted Advisors:** As mentioned above, showcasing local and experienced advisors will give a positive impression about the start-up's integration process. Know-how can be outsourced from local advisors until the German market team is completed.
- **Software:** Mastering widely adopted software and infrastructure such as Datev, Elster can give foreign start-ups the upper hand.

2.3.9 Expectations From Financial Institutions

Although each customer has different expectations from its financial service provider regarding service scope and features, some are standard for all customers in Germany.

- Financial services are taken very seriously in Germany. Customers will expect the financial service providers to have authority over financial matters. Therefore, start-ups should refrain from using inexperienced team members in customer-facing roles, as the lack of authority might impact the company's credibility. Additionally, joking about financial topics is a no-go in Germany. Although this pointer might sound too obvious, it wasn't so apparent to the crypto-saving app [Savedroid](#)¹⁹⁵ back in 2018 when a bad PR stunt backfired.¹⁹⁶ No wonder the start-up had to shut down, pivot to SaaS, and still has dramatic Google reviews.
- As a direct consequence of the high-quality expectations, customers expect financial service providers to work seamlessly and be reliable and transparent. The reliability expectation would require transparent and timely communication about downtimes, bugs, and issues that might prevent or hinder services.
- The risk-averse German society appreciates the mandatory European deposit insurance scheme. However, not all FinTechs offer deposit insurance due to their license status. When browsing through many similar products in the market, the ones that have mandatory deposit insurance (as opposed to the ones without due to lack of banking licenses) or additionally being a member of the voluntary German deposit insurance scheme might strengthen perceptions of the FinTech.
- German consumers like comparing financial products, so FinTechs that can demonstrate clear edges are likely to stand out on comparison portals such as [Check24](#) and [Smava](#) or on consumer info portals such as [Finanztip](#) or [Verbraucherzentrale](#). The same principle applies to negative product experiences and edges (e.g., slow onboarding, lousy customer service, etc.).
- Last but not least, it must be noted that German consumers are pricing-sensitive and are used to enjoying almost free or freemium products and services. Playing towards price sensitivity might be a solid market strategy; however, low-cost or free products should be sustainable in the long run as customers are not likely to appreciate pricing and fee changes (especially happening due to poor-pricing strategy or economic hardships due to start-up spending).

¹⁹⁵ FinTech Futures, [URL](#)

¹⁹⁶ Finance Forward, [URL](#)

2.4 Internalization Recommendations for Foreign (and Dutch) Companies

2.4.1 Expansion Strategy

2.4.1.1 Localization

Foreign FinTech start-ups interested in the German market are likely to understand the culture better with a local base. However, immediately opening another office or branch could be too costly when starting out. Therefore, foreign FinTech start-ups are recommended to have excursion trips and settle into co-working spaces to maximize networking while collecting feedback about their product using local collaborators (consultants, lawyers, etc.) as well as institutions and initiatives outlined earlier. The network, community, and matchmaking efforts should, no doubt, go hand in hand with detailed competitor, market, and user analyses.

Once the market research results and feedback collected indicate market potential or the pilot customers are found, foreign FinTechs can start working on their localization and go-to-market strategies.

2.4.1.2 Passive Acquisition

Although some European FinTech start-ups enjoy passive customer acquisition in Germany from time to time, start-ups should note that this kind of expansion is less sustainable in the long run. This is because long-term success comes with trust and endorsement, which only come through localization and long-term commitment to the market.

The passive acquisition strategy is also not eligible for all regulatory models. Please see **chapter 1** for more information.

2.4.1.3 M&A as a Form of Expansion

According to BVMW,¹⁹⁷ there are 3.5 million SMEs in Germany,¹⁹⁸ active in various fields. With so many small businesses in sight, business takeovers should be considered an attractive method for entering the German market or growth purposes. Instead of building a brand or product from scratch, especially when product localization or user acquisition is too costly or cumbersome, foreign businesses can consider entering the market via a take over and become natural successors of German businesses. Potential takeover candidates can be found on the local [company exchange database](#) nexxt, managed by BMWK, in addition to available loans and grants.

Companies interested in M&A in Germany can approach the Federal M&A Association (Bundesverband Mergers & Acquisitions E.V.). [Carl](#) and [Deutsche Unternehmerbörse GmbH](#) are FinTech equivalents of the company exchange database nexxt.

¹⁹⁷ BVMW, 2022, [URL](#)

¹⁹⁸ According to Destatis, there are 2.5M SMEs in Germany

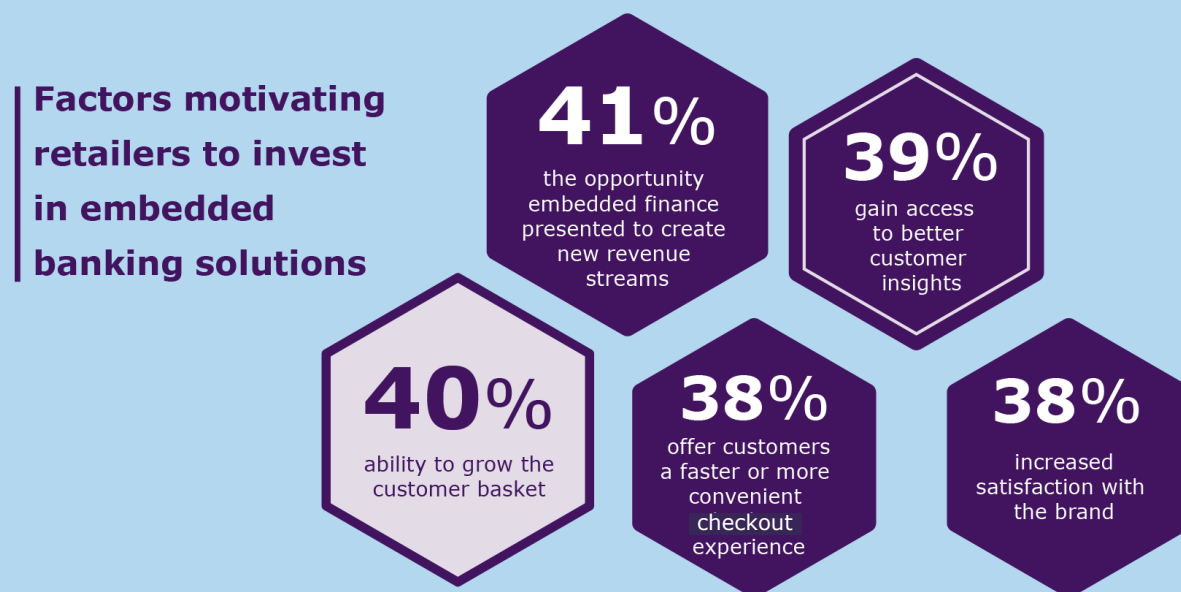
2.4.2 Market Gaps and Potential Cooperation Areas for Dutch Companies

2.4.2.1 More Embedded Finance and BaaS

According to Vodeno's research, 71% of customers in Germany wish to see financial products or services integrated into European retailers' offerings, and 75% of German retailers already use embedded finance solutions.¹⁹⁹ Accordingly, most companies intend to invest in new embedded finance solutions in the following terms.

Although various Banking-as-a-Service and Payment-as-a-Service players in Germany offer services directly or via European passporting, some are not accessible for smaller FinTechs and SMEs, due to their pricing, deep technical integration, or selective acceptance criteria.

Therefore, it is possible to conclude that there is more room for embedded finance players in Germany, as the partnership opportunities are endless.



Source: Vodeno

2.4.2.2 Open Finance

With most German financial institutions completing the long and cumbersome PSD2 requirements recently, the market has been preparing to unbox the innovation phase for open banking for a while now.

Latest data reveal that the number of TPPs (Home + Passporting) that can provide open banking services to German consumers has risen from 87 in September 2019 to 151 at the end of June 2022 – an increase of 74%, despite a sharp fall in passporting numbers after Brexit.²⁰⁰

Unfortunately, despite the increased number of players, open banking adoption hasn't unleashed its full potential in Germany due to stable and standard APIs as well as the lack of innovative consumer products. Although the Berlin Group works on the first part, the second part is challenged with condensed product selection. For example, available multi-banking apps usually do not go further than showing liquidity and do not connect to non-bank financial providers, creating a 360-degree financial picture.

Judging by the open banking growth potential, local products that go beyond the basic open banking features are likely to create a fuss in the German market.

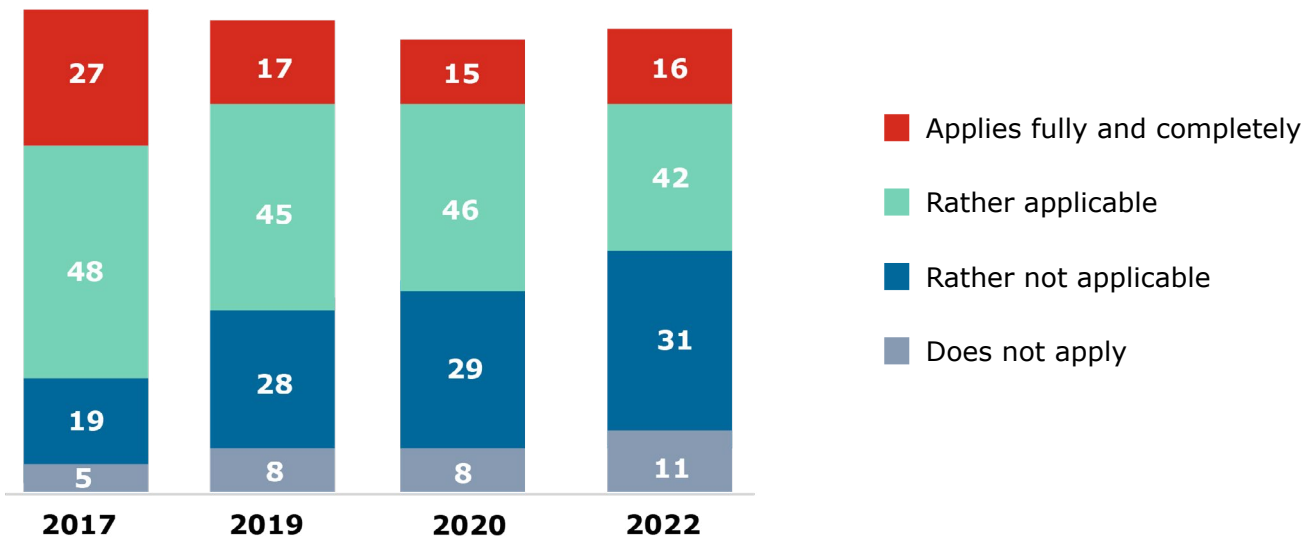
¹⁹⁹ Vodeno, "Reimagining Retail: The Rise of Embedded Finance," 2022
²⁰⁰ Konsentus, "Country Market Report Open Banking in Germany," 02.08.22, p. 4

2.4.2.3 Financial Education and Inclusion

Financial awareness has been on the rise since the pandemic. Nonetheless, financial literacy can still be improved in the German market.

According to a recent study by Bankenverband²⁰¹ that included an extensive survey, only 41% of the participants are taking care of finance topics regularly. The study also reveals that although 41% of the participants know ETFs, only 17% can explain the concept.

"I know my way around money and finance related questions"



Source: Bankenverband

The Bankenverband survey results, combined with the discussions from the previous chapters, demonstrate the financial knowledge gap. The fact that the people active in the stock market correlate differently from those who understand or follow the market is usually a recipe for disaster. Therefore, financial literacy reinforcements are needed in Germany, and since local players fall short, foreign players can use this advantage.

On that note, foreign FinTechs can start their German market journey by tackling the financial info and education gap, becoming a part of the education initiative, and gaining trust. Furthermore, foreign FinTechs can partner with associations focused on creating equal financial opportunity, such as [Mind the Gap](#).

Excessive training and onboarding material should be prepared for novel products before accepting customers from Germany, and education should be a part of FinTech products.

On a similar note, the number of growing expats and immigrants in the German market might also lead to a growing demand for new customer clusters. Looking into the profiles and needs of the newcomers can be a good starting point for foreign FinTech start-ups

201 Bankenverband, "Finanzwissen der Deutschen," 19.09.22

"According to all statistics, Berlin is THE digital financial center in Germany and the EU. The location offers absolute proximity to the federal political decision-makers and thus to the starting point of the banking and regulatory framework. Of the more than 1,000 FinTechs currently in Germany, more than a third are based in Berlin. Six of the seven German unicorns have their home here. The undisputed top position of the German capital is also evident in the amount of investments - €3.8 B in 2021 - and in the growth of company values since the start of the start-up boom a decade ago.

The established banks and financial service providers also find the location attractive and are moving their departments and company headquarters to the capital (Unzer is moving its headquarters from Heidelberg to Berlin, JP Morgan Chase wants to implement its direct banking plans from Berlin, Deutsche Bank is building a new technology center in Berlin, Commerzbank moves departments from Frankfurt to Berlin). The companies founded in Berlin grow and become established players in the industry."



Katarzyna Grajner

**Coordinator de:hub
Berlin IoT & FinTech,
Berlin Partner**

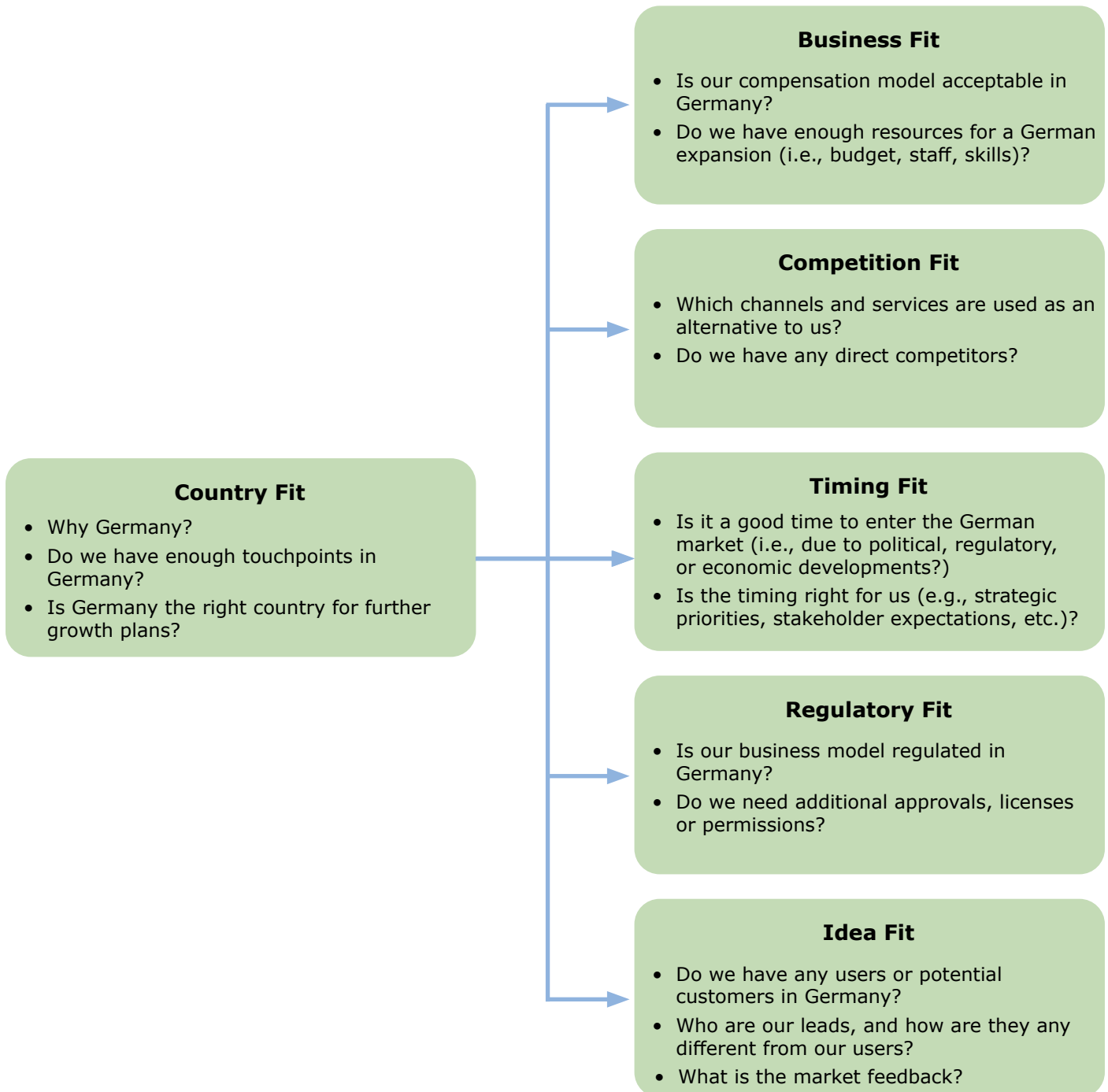


Friedemann Lotz

**Key Account Manager ICT,
Berlin Partner**

2.4.3 German Market Compatibility Checklist

Summarizing the findings of this chapter, the questions outlined below form a basis for German FinTech market expansion, starting with the whys and hows. Thus, the questions should be answered diligently, supported by external data points (e.g., market and user research, expert insights), considering the particularity of the German market.



Once foreign start-ups interested in entering the German market have assessed their market fit by answering the crucial questions, they are advised to go through the **German Market Compatibility Checklist** outlining topics critical to the German market. The Checklist is intended to function as a placeholder, assessing vital points, instead of a must-have list. Therefore, companies must examine the recommendations on a case-by-case basis to understand which direction to take and which decisions to make to fit better in the German market. Consequently, the conclusions will likely differ based on the product, business model, and user personas.

CULTURAL COMPATIBILITY

- Assessing why a particular product or service does not exist in Germany (market gap vs. market fit)
- Using local language and dialects on copy and marketing materials
- Investing in a German domain extension
- Using the formal communication etiquette
- Checking brand name associations
- Paying attention to local agendas and focus topics (e.g., energy efficiency, sustainability, recycling, etc.)
- Keeping regional and country-wide holidays in mind
- Acting upon local sensitivities (e.g., cash use and debt sensitivities, data processing, etc.)
- Testing if your product or features are above market standard digital or innovative
- Respecting local hierarchy and bureaucracy standards

TRUSTWORTHINESS

- Opening a local branch, office or allocating a local team
- Choosing the suitable legal form
- Displaying creditworthiness with more than enough capital
- Having a local address, post-box
- Demonstrating data privacy sensitivity (e.g., explaining privacy measures, only collecting the absolute necessary data points)
- Taking cybersecurity very seriously
- Working with local experts and consultants or involving them in the management
- Preferring local or locally known white-label providers
- Using local IBANs
- Explaining potential product risks openly and in detail
- Complying with local laws and regulations diligently
- Having trademark protection
- Providing German market-specific legalese
- Offering extended warranties and revocation rights

BUSINESS VALUE COMPATIBILITY

- Double-checking ethical perception of the business
- Checking local working times and expectations (e.g., no weekend work, wage level)
- Being careful about copyright infringement
- Offering German-speaking customer support and FAQs
- Positioning as less controversial and more adaptive
- Examining the pricing model
- Fulfilling the less digital needs of the domestic market (e.g., if the users have a hard time with onboarding, offering post or phone-based alternative services, enabling invoice payments)
- Being reliable and transparent

TRACK RECORD

- Finding local pilot customers who can provide testimonials
- Becoming a member of relevant networking and professional organizations
- Pursuing lobbying
- Acquiring local certifications
- Passing local compliance and quality assurance tests
- Successfully applying for local licenses
- Launching referral programs that would help the network effect

CONCLUSION

As highlighted repeatedly during the study, although the German FinTech market is growing every day and represents enormous potential.

Chapter 2 outlined the differences between the German and Dutch cultures and FinTech ecosystems. Regardless of its growth limits (due to its size and population), the Dutch market is more advanced in digital finance adoption and novel solutions. Therefore, the Dutch companies entering the German market have been observed to be taken aback during the process, starting from the (more cumbersome and longer) notarization and corporate account opening processes. Coming to Germany with a novel FinTech product might feel challenging and even like a step down in the digitization hierarchy for Dutch companies due to the resistance and conservatism in the market. Only the start-ups that understand the cultural aspects (**chapter 2, section 1.1**), consider the ecosystem characteristics as well as the possible entry points (**chapter 2, section 2**), and understand the success factors (**chapter 3, section 2.3.2**) are likely to master this mission.

Considering the post-pandemic developments and the German Government's vows to make Germany a digitization hub, the next couple of years will be crucial to take a piece of the digitization cake, especially if the foreign expansion projects offer RegTech, LegalTech, SupTech products and services supporting the digitization mission or post-Wirecard regulatory requirements.

Another path for Dutch companies could be to follow the trails of market gaps and offer solutions that are not satisfying the unaddressed or underaddressed market needs (**chapter 3, section 2.4.2**), as opposed to another neobank or BNPL product.

Due to the size and diversity of the German population and business segment, standard answers about the user needs and collaboration areas are not available. Both companies and users have different digitization adoption levels and expectations. That is why the German FinTech market has yet to have any champions covering the whole market. Even the most harmonized products cap only at several million users, becoming sustainable SMEs rather than addressing the entire German market. Growth becomes more challenging after that point as there are few examples of German FinTech companies that can address many different user groups at the same time.

Dutch FinTech start-ups that fulfill the cultural expectations of the German market should directly approach (B2B and B2C) customers about their needs, as this would be the healthiest way to understand how Dutch companies can support German consumers or entities in the long run.

Crises create market entry opportunities. Dutch start-ups that act quickly and can relieve German consumers during the economic downturn would also have the upper hand in the market.

Since German SMEs and corporates do not have an overview of all Dutch products, creating a (digital) booklet with representative companies and explaining offered services could be helpful for German companies to identify potential outsourcing start-ups that fulfill their needs or might even inspire them to use products that they didn't know existed.

Representative Dutch companies should also consider approaching the German initiatives and associations (**see chapter 3, section 2.3.2.3**) for digital and physical matchmaking sessions between the start-ups and German SMEs/corporates.

ABOUT THE AUTHORS

This study is a collaborative result of the German consultancies FinTech Consult, and Contextual Solutions.

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METHODOLOGY

FinTech Consult and Contextual Solutions created this report with the help of a series of research and stakeholder interviews conducted between September and December 2022.

Using desk research, interviews, market know-how, and insights, the authors created a unique report that covers all theoretical and practical aspects of the German FinTech market, focusing on revealing the market entry points and opportunities for Dutch ventures and entrepreneurs.

The survey referred to in the study was conducted anonymously and focused on revealing the perceptions of the market stakeholders about the upcoming fundraising developments and market trends and did not assess quantitative assessment due to time limitations. The survey was initiated in October 2022 and was sent to over seventy participants. The survey is ongoing; however, the initial qualitative results, including sixteen B2B participants, are included in the study to provide additional ecosystem context.

ABBREVIATIONS

AFM	Netherlands Authority for the Financial Markets
AI	Artificial Intelligence
AML	Anti-Money Laundering
API	Application Programming Interface
B2B	Business-to-Business
B2C	Business-to-Consumer
BaaS	Banking-as-a-Service
BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht
BIC	Business Identifier Code
BIS	Bank of International Settlement
BMWK	German Federal Ministry for Economic Affairs and Climate Action
BSI	Bundesamt für Sicherheit in der Informationstechnik (Federal Office for Information Security)
CEO	Chief Executive Officer
DeFi	Decentralized Finance
DNB	De Nederlandsche Bank
EEA	European Economic Area
EEX	European Energy Exchange
EFES	European System of Financial Supervision
ESG	Environmental, Social, and Governance
ESMA	European Securities and Markets Authority
ETF	Exchange-traded Fund
EU	European Union
eWpG	Gesetz zur Einführung elektronischer Wertpapiere (German Electronic Securities Act)
FAQs	Frequently Asked Questions
FCA	Financial Conduct Authority
FIS	Financial Stability Institute
FISG	Gesetz zur Stärkung der Finanzmarktintegrität
FX	Foreign Exchange
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GwG	Geldwäschegesetz (German Money Laundering Act)
IBAN	International Bank Account Number
ICO	Initial Coin Offerings
ID	Identity
IMF	International Monetary Fund
ISAE	International Standard on Assurance Engagements
ISO	International Organization for Standardization
KSchG	Kündigungsschutzgesetz (German Protection against Dismissal Act)
KWG	Kreditwesengesetz (German Banking Act)
KYB	Know Your Business
KYC	Know Your Customer
M&A	Mergers and Acquisitions
NFC	Near Field Communication
OECD	Organisation for Economic Co-operation and Development
POS	Point of Sale
PR	Public Relations
PSD2	Second Payment Services Directive
PSP	Payment Service Provider
SaaS	Software-as-a-Service
SDK	Software Development Kit
SEPA	Single Euro Payments Area
SME	Small and Medium-Sized Enterprises
STO	Security Token Offering
SWIFT	Society for Worldwide Interbank Financial Telecommunications
TPP	Third-Party Provider
UK	United Kingdom
US	United States
USP	Unique Selling Proposition
VAG	Versicherungsaufsichtsgesetz (German Insurance Supervision Act)
VAT	Value-Added Tax
VC	Venture Capital
WpHG	Wertpapierhandelsgesetz (German Securities Trading Act)

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