Research report to support Montold SME lending fund

Germany SME

(strategy/macro)

Overview of Germany SME sector lending patterns and sector layout to absorb Fintech credits

SME sector in Germany is a key to the economy by any metric, contribution to GDP, employment and number of companies, fintech companies that are willing to penetrate the lending business in Germany will have to focus on the SME sector as the key sector to service.

Germany SME sector is underleveraged, legacy banks were unable to penetrate the sector effectively and there is room to fill this gap by Fintechs

Banks in Germany are downsizing their number of branches and are already losing just under 1 bn Euro to fintech sector, this trend is likely to exacerbate in the transformation of the banking sector in the country.

There is a spread of 30-50 bpts between large and small credits in Germany. Larger credits are cheaper to customers than credits of under 1 mn euro. Fintech could be effective in removing this arbitrage between large and small credits.

Fintechs that will offer integral solutions to SMEs in Germany are likely to outcompete sole fintech credit providers. Most of Germany SME companies are in the service sector and are focused on finding customers while the credit instruments are lower priority to them. Fintech enterprises will be more successful if they provide products that address all of the priority business problems of German SMEs

Government support measures are abundant for SMEs in Germany especially in light of the Covid 19 crisis. Yet the survey of SME companies shows that lending rates offered to SME by legacy banks are 300-500btps higher than for large corporates and it looks as if the government support measures are not channelling through the service chain effectively. Fintech could address this problem and could be more effective in disseminating government support than the existing banks.

The emergence of fintech sector, alternative financing and the development of digitalisation can serve as the next catalyst for the economic growth in Germany and credit expansion. It could also become a profitable venue for fintech founders and investors.

62

2522

11.8

2534

Obstacles that SME list as key to obtaining credit in Germany



Source: EC SBA Survey

Estimates of distribution of 2.5 mn Germany SME enterprises by number of people employed

		2016	2017	2018	2019	2020
1-9 employees	%	31%	32%	26%	31%	31%
10-49 employees	%	37%	36%	37%	38%	37%
50-249 employees	%	32%	31%	37%	32%	32%

98.32

7.57

922.37

11.83

Source: EC SBA Survey

		Number of persons	-	Number of persons employed
	Number of enterpises '000	employed '000	Valued added Eur bn	by enterprise
Micro	2079	5795	276	2.79
Small	381	7208	334	18.92

6096

19099

10884

29984

357.7

968.7

812

1781

Estimates of distribution of 25.22 mn Germany SME enterprises by revenue size

Source: EC SBA Factsheet

Medium

Total

Total sme

Large Corporations

Executive Summary

Germany SME sector companies are highly fragmented by size, they operate in different sectors and cater to different markets. But there is one characteristic that they have in common, their level of leverage is low and Germany banking sector is unable to deeply penetrate SME lending business, leaving the room for fintech to step in and fill the gap.

Germany banking sector transforming: the number of bank branches undergoing reductions, margins remain low, cash deposits generate losses due to negative policy rates while landesbanken sector seen first privatisation. In the ongoing transformation German banks already lose just under 1bn Euro to fintechs annually. Further developments are likely to show that that fintech sector will play even more important role in the in the Germany banking sector and while large corporations and retail could in the near term still be serviced by Germany legacy banks fintech lenders could focus on providing credits and banking services to SMEs.

A key barrier for fintechs to overcome is that German SME mostly focused on finding customers, the matters of financing are currently number 3 or 4 on their priorities list behind matters such as competitions and costs. While another obstacle that the largest SME sector in Germany is services and usually the companies in this sector have little or none of equity and as a result they have nothing to borrow against for the long term. The companies that are most loans intensive are in the trade sector, construction and manufacturing. Fintech will need to be creative in their product offerings to the key SME sectors.

Germany SME list leasing as the most wanted credit solution followed by overdraft and credit line as the most wanted type of financing in the sector surveys provided by European Commission studies. Unsubsidised bank loans are the next important banking product in the German SME sector, followed by a subsidised loan supported by KFW or a regional development bank. Trade credit and factoring products are tailing behind. The product specific demand will need to be addressed by fintech solutions, while as it normally happens with technological developments in the financial sector the final fintech offering could be a set of integral products and solutions across all major banking products that will win the hearts of customers.

Credit rates on loans for SMEs remained reflective of overall credit condition set out by the ECB rates. ECB data shows that is some premium of 30 -50 bpts inherent in smaller loans versus loans over 1mn Euros while survey conducted by Mondtold show that rates for loans for SME are 300-500btps more expensive than large credits - this could be dully addressed by fintechs which are less sensitive to costs whenever the customer loan solution is large or small.

The emergence of fintech sector, alternative financing and the development of digitalisation can serve as the next catalyst for the credit expansion and economic growth in Germany. It could also become a profitable venue for fintech founders and investors.

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1. Overview of SME sector in Germany

SME sector is a highly fragmented sector of German economy. Both: micro enterprises with less than 10 people employed and revenues below 100,000 Euros per year and medium size enterprises with 200 people employed but nevertheless which have found a market niche enabling them to generate over 100mln Euros annually qualify as SME. In German these companies are called Mittelstand, highlighting the possible transition of a micro enterprise with a market niche into a compact multimillion company.

Formation of SME sector in Europe and in Germany specifically is unique global economic even and is a result of entrepreneurship, traditions, carefully nurtured economic policy and economic theory. As a result 99% of all companies in Germany are SME (which also true for Europe as a whole).

German SME sector employs 19 mn people (46% of total workforce and 63.7% of Germany workforce in the non-financial sector). It generated 968bn EUR or 54.4% of total Germany value added in the non-financial sector (2018 figures).

The distribution of value added is spread almost evenly among SME size classes in Germany.

- The largest class of micro SMEs with 0-9 persons employed consists of 2,079 mln companies and generates 28% of VAD.
- Small SME with (10-49 people) generate 34% of VAD and consists of 0.38 mln companies
- 62,000 medium SME with 50-249 people generated 36% of VAD

SME sector total lending is not a transparent figure. Credits to SME sector total at 290 bn EUR in 2011 (according to Deutche Bank). Since 2011 sector leverage increased 60%. Total short and long term credits and facilities in the SME sector increased from 290bn EUR in 2011 to 465bn in the end of 2020 according to the model constructed by Montold for SME sector lending for the purpose of this report. This bodes well with the data for total credit expansion of the NFC in Germany from 2,330 bn EUR in 2015 to 2817 bn EUR in Q3 2020.

The Germany SME sector generated 28bn EUR in interested payments on this credits according to <u>KFW</u> in 2019.

According to the Montold model of SME balance sheets -micro and small enterprises maintain 237bn euro of debt on balance sheets in 2018-2020 in long and short term debt instruments and generate an estimate of 16bn Euros in annual interest payments in 2019. Indicating a size of income for creditors active in the sector.

	number of enterpises '000
Micro	2079
Small	381
Medium	62
Total sme	2522
Large Corporations	11.8
Total	2534

	number of persons employed '000
Micro	5795
Small	7208
Medium	6096
Total sme	19099
Large Corporations	10884
Total	29984

	Valued added
	Eur bn
Micro	276
Small	334
Medium	357.7
Total sme	968.7
Large Corporations	812
Total	1781
Source: <u>EC SBA Survey</u>	



Source: Montold SME Lending Model

2. Key lending institutions

Germany banking system is well developed; its assets total 9.2trln Euros.

Banking sector in Germany consists of 3 parts and we estimate the assets distribution in German banking sector as follows:

- commercial banks (privately owned) -32% of assets,
- public banks (central or regional government owned) Landesbanken and savings banks - 17% of assets,
- cooperative banks including DZ (owned by its depositors) 9% of assets
- Development banks 6% of assets
- Various other banks 9%
- Central bank balance -27% of assets

Source: 2019-2020 data BIS, Bundesbank, GTAI, Tradingeconomics, respective banks websites.

Total banking assets in Germany reached over 270% of GDP but the balance sheet data has less intuitive value than deposits data. Total deposits in banks in Germany are at 83% of GDP or 2.7 trln Euros and this is a better reflection of assets available for funding Germany non financial sector (excluding development banks funding).

Top 4 banks include Deutsche Bank with 1.3 trln Euro in assets, DZ Bank (recently formed in merger of cooperative banks) with 518 bn Euros assets, Commerzbank 462 bn Euro in assets and KFW development bank with 485 bn Euro in assets.

Germany banking system is in transition. In 2018-2019 it has seen consolidation in its Landesbanken sector (regional government owned wholesale banks) sector where now only 5 regional banks remained while one of Landesbanken Hamburg Commercial Bank (former HSH Nordbank) was privatised. Cooperative banks sector also seen consolidation which yielded DZ Bank and it is now the second largest bank in Germany.

The US private equity firm Cerberus Capital led by Steve Feinberg (formerly of Gruntal &co) is very active in the sector transition. Cerberus holds equity stakes in key German Banks: Deutsche Bank, Commerzbank and in recently privatized Hamburg Commercial Bank.

The number of banks in Germany has dropped sharply in the last 30 years and by 54% since 1995. Most of the transition happened as a result of stress to Euro transition, Basel II and III balance sheet requirements and 2008 crisis and subsequent negative rates environment which act as a special tax on Germany banks P&L resulting in 500bn Euros annual loss.

According to various sources - most of the banking in Germany is focused on retail business and the largest commercial banks are among banks most focused on retail.

The key lending institutions to SME sector in Germany are savings banks.

Largest German Commercial Banks by Total	

Assets 2018 (in EUR billion)	
Deutsche Bank AG	1325
Commerzbank AG	462
Unicredit Bank AG	286
DB Privat- und Firmenkundenbank	
(ehemals Postbank)	276
ING-Diba AG	171
Hamburg Commercial Bank (former HSH	
Nordbank 42.% owned by Cerberus)	130
Other	1033.5
Comercial banks total	3445

Largest German Saving Banks by Total Assets 2019 (in EUR billion)

2019 (In EUR billion)	
Hamburger Sparkasse	46.6
Sparkasse Köln/Bonn	27.3
Kreissparkasse Köln	27
Stadtsparkasse München	20
Frankfurter Sparkasse	19.8
Sparkasse Hannover	16.6
Mittelbrandenburgische Sparkasse in	
Potsdam	14.2
Sparkasse Pforzheim Calw	13
Ostsächsische Sparkasse Dresden	12.9
Kreissparkasse München Starnberg	
Ebersberg	12.7
DekaBank*	113
(LBBW)	241
BayernLB	220
Helaba	219.3
Nord/LB	160
SaarLB	15
Other	353.52
Public banks total	1531.92

Largest German Cooperative Banks by Total Assets 2019 (in EUR billion)

518
49.7
14.7
14.1
13.1
12.7
12.5
10.5
8.9
8.6
8.3
201.33
872.43

German Development banks and

KfW	485
Baden-Württemberg: L-Bank,	
Investitionsbank Berlin, Investitionsbank	
des Landes Brandenburg , Bremer	
Aufbau-Bank, Hamburgische Investitions-	
und Förderbank) see the section on	
Govermnet Support for the total list of	
Germany development banks	49

Development banks total
Source: Mckinsey

534

As was mentioned before, the total loans to SME sector is a non-transparent number and rarely quoted in literature and statistics.

The total corporate loans account for over 60% of the GDP in Germany at 2.8 trln EUR in q3 2020 according to BIS and is up from 1.6 trln Euros in 2015. SME credits (465 bn EUR estimate) constitute 16% of total corporate loans.

Lending to households amounted to 1.9trln euro and up from 1.6 trln in 2016. Mortgage lending is roughly half of the total to households and remaining part is consumer loans.

There are few important trends that can make lending to SMEs more robust. One is securitisation: with further internationalisation of bond markets larger corporates are likely to issue more bonds instead of bank debt which could find investors on domestic and international markets; this will free up some domestic bank's capital and will make it more widely available of SME. Securitisation, in a separate development, will also help package large pools of SME credits into more liquid bond instruments which will improve access to debt financing by SME.

Fintech development is also a trend which can help SME lending more robust. Larger corporates usually organise special departments to focus on their financing tasks. SME however are by definition – very tight organisations in terms of headcount, and unable to allocate significant human resources to tackle financing problems. This is where fintech solutions could ease access to financing for SME, when technology will substitute parts or all of the steps required for loan application and approval.

The developments in fintech sector are addressed in chapter 8 of this document.

Margins remain low in Germany banking sector, cash deposits generate losses due to negative policy rates. In the ongoing transformation German banks already lose just under 1bn Euro to fintech annually. Further developments are likely to show that that fintech sector will play an even heavier role in the in the Germany banking sector and while large corporations and retail could in the near and medium term still be serviced by Germany legacy banks fintech lenders could focus on providing credits and banking services to SMEs.

	Assets
Germany total banking assets	Euro bn\$
Comercial banks total	3445
Public banks total	1531.92
Cooperative banks total	872.43
Development banks total	534
Central bank	2471
Total	8854.35

Source: Trading Economics, Mckinsey





3. Use of loans by industry - which sector borrows the most

Industry/Sector	Financing needs for
Manufacturing	Machinery, Working capital, Expansion, Depreciation, Acquisitions, Trade finance
Construction industry	Machinery, Land, Project Finance, Receivables
Trade, maintenance and repair of motor vehicles	Inventory, Machinery, Depreciation, Real- estate
Professional, scientific and technical services	Machinery, Acquisitions, Working capital, Project finance
Real estate, Housing	Real-estate, Depreciation
Energy supplies Water supply, disposal, removal of environmental pollution	Trade finance, Depreciation, Acquisitions Machinery, Working capital, Expansion
Mining and quarrying	Machinery, Project finance, Working capital, Acquisitions
Transportation and storage	Machinery, Depreciation, Acquisitions
Hospitality industry	Real estate, Depreciation, Working capital, Aquisitions
Information and communication	Acquisitions, Project finance, Working capital
Other economic services	Depreciation, real estate, Working capital, acquisitions
Repair of computer equipment and household goods	Real estate, Storage, Depreciation, Expansion

Financing needs by sector are summarised in the table below

Total Debt bn EUR of micro and small enterprises by sector					
Manufacturing	83 461				
Hospitality industry	38 633				
Trade, maintenance and repair of motor vehicles	32 595				
Real estate, Housing	22 699				
Construction industry	22 140				
Transportation and storage	13 506				
Other economic services	9 627				
Professional, scientific and technical services	8 770				
Information and communication	4 171				
Water supply, disposal, removal of environmental pollution	794				
Energy supplies	377				
Mining and quarrying	214				
Repair of computer equipment and household goods	166				
Total	237 155				

Source: KFW, DB, Montold, Genesis.destatis.de

Estimates of debt levels (long and short term Euro mln)

Total Debt bn EUR	1-9	10-49	50-249	Total
Manufacturing	21 522	61 939	86 079	169 540
Construction industry	10 588	11 553	4 163	26 303
Trade, maintenance and repair of motor vehicles	13 409	19 186	16 884	49 479
Professional, scientific and technical services	5 482	3 288	1 787	10 558
Real estate, Housing	13 254	9 445	83 421	106 120
Energy supplies	28	349	2 041	2 418
Water supply, disposal, removal of environmental pollution	67	727	1 429	2 223
Mining and quarrying	41	173	195	410
Transportation and storage	4 374	9 132	9 457	22 963
Hospitality industry	12 140	26 493	11 919	50 552
Information and communication	2 328	1 843	1 986	6 156
Other economic services	4 742	4 886	6 965	16 593
Repair of computer equipment and household goods	132	34	23	190
Total	88 108	149 047	226 351	463 505

Interest bn EUR	1-9	10-49	50-249	Total
Manufacturing	1 614.18	4 026.01	4 734.36	10 374.55
Construction industry	794.08	750.91	228.96	1 773.96
Trade, maintenance and repair of motor vehicles	1 005.69	1 247.07	928.63	3 181.38
Professional, scientific and technical services	411.18	213.72	98.29	723.19
Real estate, Housing	994.08	613.90	4 588.17	6 196.15
Energy supplies	2.11	22.68	112.28	137.06
Water supply, disposal, removal of environmental pollution	5.02	47.24	78.59	130.86
Mining and quarrying	3.09	11.26	10.74	25.09
Transportation and storage	328.02	593.60	520.15	1 441.77
Hospitality industry	910.51	1 722.06	655.54	3 288.11
Information and communication	174.61	119.76	109.21	403.58
Other economic services	355.62	317.58	383.09	1 056.29
Repair of computer equipment and household goods	9.89	2.24	1.27	13.41
	6 608	9 688	12 449	28 745

Estimates of interest levels (long and short term Euro mln)

Source: KFW, DB, Montold, Genesis.destatis.de

4. Analysis of loan products used by SMEs

Leasing or mortgages are the most popular in SME credits, followed by credit line and overdraft. Conventional bank loans and subsidized bank loans are next in popularity while trade credit and factoring trails. The most common uses for these financing is for purchase of machinery, tools or real estate and financing of working capital.

Loans sizes which are most popular is in the range of 25,000 -100,000 Euros, followed by 250,000 to 1 mln Euro loans class size. The demand for over 1 mln euro loans and 0.1-0.25 mln Euros is smaller than first two classes. A less popular size class are mini loans of size under 25,000 Euros according to statistics of KFW.

SMEs' borrowing plans for investment purposes increased by EUR 17 billion to EUR 141 billion at the start of 2019. But SMEs borrowed new short-term and long-term bank loans totaling EUR 75 billion. Revealing a trend that SMEs traditionally borrow half of what they initially planned. They borrowed 30bn Euros in short term loans and 45bn in long term loans according to <u>KFW</u> Research.

In 2018, SMEs made around EUR 184 billion of new investments but depreciated approx. EUR 142 billion. Their net investment thus totalled EUR 42 billion.20 The capital investment to depreciation ratio stood at a good level of 130%.

Aggregate gross fixed capital formation of the corporate sector in Germany grew from approx. EUR 399 billion to EUR 419 billion in 2019. The share of small and medium-sized enterprises in new investment by all enterprises thus remains quite stable at around 44% loans according to <u>KFW</u> Research.



Which banking products are the most important?

source: Special study accompanying the EC SME annual report

2017

2018

2019

2020

10%

5%

0%

2016

5. Loan rates for German SME

SME lending is much higher margin business. Although Euro zone interest rates are negative and large corporates borrow at 1-2%, published regulargy SBA surveys show that the rates for new loans for SME are on average possessed 3% interest in 2020 and down from 4% in 2018-2019. This is quite a big difference. Yet survey conducted by Montold indicates that SME credits are very often by 300-500bpts higher than 3% rates published in SBA surveys.

Montold model derives that most of the SME are still paying around 5-7% in interest on their loans to produce interest payments highlighted by KFW research of 28bn EURpa - the interest they were locked up when they took out a loan few years ago and that rates for new SME loans are also on the order of 6-8%.

SBA Interest rates survey





6. Structure of capital expenditures of small businesses - what are loans used for

Most of the SME use financing for leasing, mortgages or other fixed investment needs, however recently the totals for this purpose of financing was in declining mode, while working capital financing needs and refinancing needs started picking up.

Most of the SMEs report declining fixed assets on the balance sheets. On one hand this trends suggest that SME want to invest less, on the other hand perhaps SMEs are choosing to invest into digital assets rather than into fixed.

Financing uses in the past



Investment into digital assets ranks closely to second reason in the main reasons for investments.



Main reasons for increasing investments in 2019



Did fixed assets increased/decreased over a previous year?



7. Infrastructure bottlenecks - what is required to obtain a loan?

The example of pre-crisis 2019 summarised in <u>KFW SME Panel</u> shows that German SME planned for 140bn EUR of loans but only received 75 bn Euros in short and long term debt. Most of the obstacles to financing are summarized in the chart below.

Among key disclosed reasons most often cited is insufficient equity, collateral or guarantee. The second persistent reason is paperwork and bureaucracy required to apply and receive the loan. For this kind of borrowers digital developments in fintech lending will be most useful. Larger corporate allocate significant human resources to tackle financing problems whereas for smaller businesses this is often a problem but the one which could be solved by technology development. Technology could also make financing to those SME which are prevented from taking a loan by higher rates. The size of the loan/risk discrimination and rates arbitrage makes SME loans more expensive for the borrowers for the reasons that it takes just as much time for the bank to approve small loan as large when human resource is required in the loan approval process. Technology development will erase most of the small vs. large burdens for the borrowers and will make credit rates more evenly spread for the loans of similar maturity, risk but different sizes and bank margins.



What are the obstacles to getting a financing?

8. Development of digitalization and alternative credits for German SME

Germany fintech sector is highly fragmented and in the nurture stage at the moment almost on any measure. There is plenty of space available for new entries to country's fintech stage; there is plenty of room for growth.

Most of fintech in Germany specialize in providing Saas to substitute legacy banking and financial transactions, automate lending, payments, working capital management, investments, secure identifications and document management.

Table on the right (which is expanded in the Appendix A) summaries top level info of key Germany fintech companies. According to the available sources the combined revenue of fintech companies operating in Germany is 1.4bn Euro but the data includes revenues for Swiss based and publicly listed Avaloq with over 500mln Euro in annual revenues and Germany pubic company Hyppoport which is not really in the banking sector with 330 mln\$ in revenues. Excluding these 2 companies – the revenues for German fintech are just a notch above 500 mln Euro (these are 2020/19/18 revenues figures gather from available sources).

There are some sources that estimate fintech average annual revenues as much as 900mln Euro in in 2021/2020 and that corresponds well with our data if we include Hyppoport.

Of the total figure of 900 mln Euro in annual revenues around 300 mln are contribution from various fintech companies involved into SME banking either directly providing loans or by providing Saas and applications for existing legacy banks and other financial entities to help with their service digitalization.

Companies that are directly involved in SME or retail banking generate approximately 230 mln Euro in revenues which implies that they have issued or helped to issue 5-10 bln Euro in loans overall which is a very modest number vs. 75bn Euro borrowed by SME. While SME share of credits estimate in total account for 1-3bn EUR issued with an aid of fintech companies or directly by German fintech banks. This corresponds to just 0.5-1% of total SME credits in Germany and 1.3-4% of annual volumes.

In response to technological developments major Eurozone banks started the implementation of new unified payment scheme and solution, the European Payments Initiative (EPI)

The ambition of EPI is to create a unified pan-European payment solution leveraging Instant Payments/SEPA Instant Credit Transfer (SCT Inst), offering a card for consumers and merchants across Europe, a digital wallet and P2P payments.

The solution aims to become a new standard means of payment for European consumers and merchants in all types of transactions including instore, online, cash withdrawal and "peer-to-peer" in addition to existing international payment scheme solutions.

Fintech	Service/Product	Revenue 2020 mn EUR	Fundin g mn EUR
Avaloq	Saas for banking	500	353
Hypport	Broad fintech/Some lending	337	
N26	SME and retail bank	110	813
Kreditech	SME and retail bank	56	
Smava	SME and Retail lending	45	187
Mambu	Saas for banks	45	183
Finanzcheck.	(Realestate service	42	
Solarisbank	Saas for banking	28.1	179
Auxmoney	SME and retail credits	25	690
Treefin	Saas for personal finance	20.3	0.7
Holvi	Saas for payments	16	1.4
Kontist	Saas, Asset Management	7.5	46
Finleap	Saas for banking	6.5	115
Penta Fintech	1 Saas for banking	5	54
Raisin	Market place for deposits	5	205
Traxpay	Saas for payments	4	19
Spotcap	Saas for SME and retail le	2.8	92
Compeon	SME banking	2	16.9
Lendico	SME and retail bank	2	22
Kapilendo	Equity crowdfunding	1.2	14
Montold	SME Lending	0.5	1.8
Finanzguru	aggregator for accounts	0.5	
Fincite	Saas for wealth manageme	0.4	

Source: Montold, Craft.co, Owler

There are likely to be additional political developments which could ringfence legacy banking business via additional regulation.

The European Payments Initiative (EPI) founding members to date are: BBVA, BNP Paribas, Groupe BPCE, CaixaBank, Commerzbank, Crédit Agricole, Crédit Mutuel, Deutsche Bank, Deutcher Sparkassen- und Giroverband, DZ BANK Group, ING, KBC Group, La Banque Postale, Banco Santander, Société Générale, UniCredit

9. Government support and its effectiveness

KFW (Kreditanstalt für Wiederaufbau) is the key development bank in Germany. As of the end of 2019 its assets totaled 509 Euro bn, and approximately 40% of assets have been issued to finance SME sector in Germany.

Despite KFW mandate as a development bank, it remains profitable financial institution recording 1.3bn EUR in consolidated net profit in 2019, which highlights that lending to SME sector could be a profitable venue. This is despite that KFW provides funding for SME sector at discount interest rates.

The KFW business was launched in 1948, the Allied Military Government commissioned the establishment of a central body for financing reconstruction in the occupied western zones of Germany.

Since then it has been one the drivers, policy maker and research provider for SME sector in Germany. KFW provides credits and equity for small business in Germany. Its influence has been especially acute during the 2020 Corona virus crisis when it started disseminating Corona aid loans.

Basically KFW operates its business as a large securitization vehicle. It borrows on the international bond markets at favorable rates and distributes the obtained funding to SME sector and Germany large corporation at rates with small premium to its cost of funds.

KFW structure is quite compact; it doesn't need many staff because the loan origination occurs via customer's local bank. The bank bears only 20% of the credit risk, KfW bears 80%. This makes it easier for the bank to decide on the loan - provided, of course, that business idea holds the prospect of sustainable economic success.

It is not transparent what is the revenue split between the KFW and the local banks via which the customer applies for the loan. As it is most likely that the KFW loan or investment for which customer applied via local bank eventually included into KFW balance sheet. Local bank is granted some carry or the loan is jointly owned.

There is a substantial degree of bureaucracy involved in filling up the application for KFW loans via local banks, while paper work involved into obtaining loans has been previously cited as one of the obstacles to get financing by some customers.

KFW key support for SMEs are available from 3 sources:

- StartGeld
- Start-up Loan
- Capital for Start-ups

The programs are summarized in the table in the Appendix C.

During the year of pandemic KFW was especially active in providing support to German SME and large corporates.

In a regular year it disseminates on average 45bn EUR of promotional funds with for German SME and larger corporates. But in 2020 KFW distributed 106bn EUR to German SME and corporate – which is more than 100% increase in spending.

Besides KFW, each Germany region operates its regional development bank. The summary of the regional banks support programs for SME is summarized in the table in the Appendix D.

Importance of subsidies loans increase in the last 5 years for SME in Germany





Usage of subsidized loans in the last 6 months of 2020

10. Resume that supports efforts to improve lending to SMEs through fintech

Fintech developments in Germany are in nurture stage at the moment but the backdrop of transitioning banking sector and underleveraged SME sector creates an opportunity for rapid growth of fintech providers of SME credits and other banking and business services for SMEs.

Small businesses do not often have human resources and time to go through lengthy, laborious and bureaucratic loan applications procedures unlike large corporations. Volumes of SME lending of 463 bn EUR in Germany can double in the next 10 years if fintech lenders will provide technology which will make credit accessible for smaller businesses as easy as it is available for large businesses.

Besides red tape obstacles banks, relying on their legacy, credit rating techniques often do not properly evaluate SME credit risk which results in more expensive credit rates for SMEs or even credit denial. Equipped with proprietary scoring tools fintech could offer more competitively priced products to SME.

There is a substantial arbitrage in credit spreads between small and large credits which is rooted in legacy banking work routine and costs for loan origination. This will be positively addressed by fintech applications where there is no cost difference between whether originating a large or a small credit.

Developments in securitisation and overall credit conditions in Eurozone is another positive development on the international financial markets which will allow fintech SME lenders constant access to capital, refinancing and will secure better margins for their business.

Fintech providers with diversified product set offering credit products, payments and other digitalisation products and business services especially if they are aimed at helping customers to expand their businesses will be more competitive then sole credit providers.

Among risks for Germany fintech sector is the development of international competitors especially well funded US creditors of SME. Attempts to ring fence banking sector with regulatory barriers is yet another risk for fintech. But Germany fintech views these risks as an opportunity to become attractive acquisition targets for legacy banks or for large international players.

The emergence of fintech sector, alternative financing and the development of digitalisation can serve as the catalyst for credit expansion and overall economic growth in Germany.. It could also become a profitable venue for fintech founders and investors.



11. SME Sector in Germany, France Austria, Netherlands and Spain in charts

Germany has least fraction of micro SME

Germany Micro SMEs is a smallest fraction







■ industry % ■ construction % ■ trade % ■ services %

Fraction of revenues from exports



■over 50% %



Ranking of overall business problems for SMEs





Has the level of interest rates increased in the last 6 months?



Has debt level increased?



Importance of	financing of	options	(ordered by	Germany	column)
			(,

		Germany	France	Austria	Netherlands	Spain
Leasing or hire-purchase	%	57%	47%	53%	40%	33%
Credit line, bank overdraft or credit cards overdraft	%	50%	45%	62%	48%	47%
Bank loan (ex. subsidised bank loans, overdrafts and credit lines)	%	44%	62%	52%	42%	54%
Grants or subsidised bank loan	%	43%	41%	48%	15%	53%
Retained earnings or sale of assets (Internal funds)	%	29%	25%	31%	13%	22%
Other loan	%	27%	8%	17%	29%	14%
Equity capital	%	12%	15%	8%	19%	3%
Trade credit	%	11%	20%	17%	27%	42%
Factoring	%	6%	13%	6%	5%	11%
Other sources	%	6%	4%	3%	8%	2%
Debt securities	%	1%	5%	1%	1%	1%

What sources of financing were used in the last 6 months?





Why did you say that loans are not relevant for your enterprise?

source: Special study accompanying the EC SME annual report

11. Appendix A Key Fintech Business in Germany

Company	Service/Product	Revenue 2020	Funding	
Finnest Finnest.com Günther Lindenlaub CEO, Founder	SME equity financing		1.1	Finnest is a fintech company developing a crowd-investing platform. The platform provides established SMEs with alternative access to the capital market and provides crowd investors with opportunities to invest in stable and proven companies, excluding startups and projects. Its parent is Invesdor. Investors Maxfield Capital, Neulogy Ventures
<u>Compeon</u> compeon.de	SME banking	2	16.9	COMPEON is a product and vendor-independent full-service provider for SME financing. It works with more than 220 banks and alternative finance firms to facilitate a range of financing solutions for business borrowers. Among them are loans and leasing, factoring, mezzanine capital, fine trading, and project financing. <u>DvH Ventures</u> , btov Partners, TEV Ventures, Crossventures, Business Angel
Smava Alexander Artope	SME and Retail lending	45	187	Smava is an online comparison portal for installment loans, where every prospective loaner receives online loan from a wide selection. Through a single free online query interested parties receive many personal offers from different credit providers, and can chose the most suitable one.

Auxmoney	SME and retail credits	25	690	Auxmoney is a Germany-based digital lending platform that allows users to apply for loans, credit cards and commercial finance products for individuals and businesses.
https://www.auxmoney.com/ Co-Founder & CEO Raffael Johnen				Auxmoney is a Private company. Raffael Johnen is the Co-Founder & CEO of Auxmoney and has an approval rating of 88 from Owler members. Auxmoney has raised a total of \$690.5M in funding. Auxmoney's top competitor is RateSetter, led by Rhydian Lewis, who is their Co-Founder & CEO
N26 <u>https://n26.com/</u> Valentin Stalf CEO	SME and retail bank	110	813	Germany unicorn mobile bank with 819m Euros rised in funding. Offers retail banking to clients in Europe and in the US. Revenues in 2019 were 100mnl euros. Did not dislose revenues for 2020, but the net income loss in 2020 was recorded at 110mln Euros – down from 165mln euros net loss in 2019. In 2018 revenues stood at 40 mln euros. Bank has 7mln users globally.
Kreditech	SME and retail bank	56		Kreditech combines market-leading tech capabilities and data science, with sound insight into consumer borrowing needs and extensive experience in Point of Sale (POS) and e-commerce partnerships. The company lends through its consumer brands Monedo Now and Kredito24, as well as through partners in four markets: India, Poland, Russia andSpain. In 2018, the company focused on pivoting its operations toward the near-prime lending market, with installment loans as a key product. A new management team was installed in early 2018 and, since that time, has focused its efforts on improving Kreditech's operational efficiency, risk- and cost-management capabilities, and driving toward profitability. Throughout 2019, the company has successfully transitioned back to growth in its core installment loan product and has achieved its highest-ever levels of monthly installment loan issuance. In 2018, Kreditech issued EUR 107.3 million of credit across all of the markets in which it provides lending services. The company generated revenue from core products amounting to EUR 56.1 million.
Lendico	SME and retail bank	2	22	Lendico is a fintech company providing a lending platform. It offers the same rates as traditional banks and enables users to apply for a loan online. It was bought by ING Diba in 2018
Montold CEO Yulia Yaroslavtseva	SME Lending	0.5	1.8	Montold specilises on fintech solutions for SMEs providing Saas for payments and SME lending via its fund. Company is based in Berlin
Commnex	SME and public sector banking			CommneX GmbH is independent digital marketplace for the financing and investment needs of the public sector in Germany and Austria. The FinTech company based in Munich was founded in 2016 by the two managing directors Friedrich von Jagow and Carl von Halem. Online since spring 2017, CommneX has been bringing together financial needs from municipalities, other public corporations and local companies with offering financial partners on the digital tendering and brokerage platform. Municipal companies can also access funding from the development bank for North Rhine-Westphalia on the Munich start-up's online platform, which is active throughout Germany.
<u>idnow.io</u> Joseph Lichtenberger Chief Financial Officer	Security		\$58.2 m	IDnow is a high-tech company that provides solutions for identification checks and electronic signature. The company offers video-based identity checks that verify the identity of customers and facilitate the secure electronic identification of individuals through Internet browser and mobile applications. It provides platform-specific solutions that guarantee verification of customers, clients, and contractual partners for companies and institutions. Investors- European Investment Bank (EIB), Corsair Capital, Raja Hadji-Touma
Tradico	Sass for working capital		3.9	Tradico is a provider of a financial trading platform intended to offer working capital online. It finances the inventory of its clients and pays the invoices of their suppliers, while the buyer of the goods gains time to settle the invoice. Tradico's platform is a non-bank financing instrument for goods and raw materials as well as for international trades and current assets. Investors include Speedinvest, Earlybird Venture Capital, Hermann Hauser, Michael Grabner Media GmbH, DvH Ventures, Henry Ritchotte, Crossventures

Kontist	Saas, Asset Management for	7.5	46	Kontist is a Berlin-based fintech platform that offers banking, automated investment management and financial advisory solutions for individuals and businesses.
https://kontist.com	banks			
Co-Founder & CEO				Kontist's headquarters is located in Berlin, Berlin. Kontist generates \$75K in revenue
Christopher Plantener				per employee Kontist's latest funding round was a Series B for \$29.7M on Mar 2021. Kontist's top competitor is Penta, led by Markus Pertlwiese
Compraga	Saas for working capital	na	na	Vienna based, provides working capital management solutions, procurements optimization.
DONOVAN PFAFF CEO				
http://www.compraga.de				
Fincite	Saas for wealth	0.4		Fincite is a company engaged in the development of wealth management software.
	management			The company offers financial advice and portfolio management software Fincite.CIOS. It enables retail banks, private banks, and insurers to provide digital investment services to their clients. Besides, the company offers aggregation, analytical, and optimization engines.
Spotcap	Saas for SME and retail lending	2.8	92	Spotcap is a fintech company offering digital business lending technology to financial
Spotcap.com	and retail lending			institutions. Its solutions include onboarding, data processing, and loan servicing. Spotcap's decisioning technology includes numerous risk profiling services that aim
Jens Woloszczak			1	to optimize the underwriting process
Founder and CEO				
Treefin	Saas for personal	20.3	0.7	Treefin is a technology company that develops an app for personal financial
Treefin.com	finance			assistance. The app aggregates users' insurances, banking and investment accounts, identifies savings and optimization potential and gives them a picture of
				their personal finances.
Manuel Wanner-Behr				
Chief Executive Officer				
Holvi	Saas for payments	16	1.4	Holvi is a Finland-based fintech platform that provides payment processing, accounting and bookkeeping solutions for self-employers.
https://www.holvi.com/	payments			accounting and bookkeeping solutions for sen-employers.
Co-Founder & CEO				Holvi is headquartered in Helsinki, Other. Holvi has a revenue of \$16.1M, and 100
Tuomas Toivonen				employees. Holvi has raised a total of \$1.4M in funding. Holvi's main competitors are AND CO, Bonsai and Osu. Acquired by Keru Fintech Investments
Traxpay https://www.traxpay.com	Saas for payments	4	19	Payment service, software-as-a-service platform offers all common supply chain financing instruments and lets optimize global financing of goods and services. The
Markus Rupprecht, CEO,	payments			Traxpay platform connects clients with suppliers and financing partners — simply,
Traxpay				quickly, and securely.
				Buyers and sellers who use the dynamic discounting solution that Traxpay offers benefit from flexible payment terms for goods and services, which means buyers get
				a discount depending on when they decide to pay. Retailers and suppliers can use
				the Traxpay platform to decide whether they want to settle a payable earlier and
				receive a discount in their individual case or whether they would like a bank to offer
				them interim financing. Traxpay already processes volumes of more than one billion
				euros every year. In July 2020 Deutsche Bank AG has announced its investment in the Frankfurt-
				based fintech Traxpay GmbH
	Saas for			cashpresso is a financial technology company providing a payment platform. It offers
	payments			a mobile app that allows users to make payments and online purchases and take
Cashpresso				microcredits.
RatePay	Saas for finance			RatePay is a financial technology company providing online payment solutions. It
				offers a platform that provides invoicing, instalment payments with real-time online approval, direct debit, and pre-payment solutions.
Manaka	Saas for banks	45	183	Mambu provides customers a platform on which to build modern, agile customer-
Mambu https://www.mambu.com/			1	centric financial businesses. It provides financial enterprises, digital banks, global telcos and leading fintechs - use Mambu's SaaS banking platform to become more
	1	1	1	THEIROS ADD PROTOCITION FOR A THE MANDOUS SARS DRINKING DIRITORITI TO DECOME MORE

co-founder Mambu				New10 of ABN Amro, N26, Asto, TymeBank, MSB, Tandembank
Avaloq JuRg Hunziker Chief Executive Office r	Saas for banking	500	353	Zurich based public company Avaloq is a company providing software as a service (SaaS) and business process as a service (BPaaS) solutions for banks and wealth managers. It offers Avaloq Core, a platform that delivers wealth management, retail banking, and other capabilities as well as hosts a range of functionalities, such as structured products, payments, and more; Avaloq Wealth, a platform that helps advisors to deliver personalized advice and bespoke services and reduce time spent on preparing and analyzing investment proposals; and Avaloq Insight, a platform that provides data science developed for banking and wealth management.
Solarisbank Ronald Folz Chief Executive Officer	Saas for banking	28.1	179	Solarisbank is a provider of a banking-as-a-service platform that enables companies to offer their own financial products. Through APIs, partners gain access to Solarisbank's modular services including bank accounts, payments and e-money, identification and lending services, digital banking, as well as services provided by integrated third-party providers. Investors Lakestar, Vulcan Capital, Visa, Storm Ventures, Banco Bilbao Vizcaya Argentaria, HV Holtzbrinck Ventures, Global Brain, Samsung Catalyst Fund, SBI Holdings, BBVA,UniCredit, FinLeap, Arvato Financial Solutions, SBI Group,UniCredit Group, yabeo capital, ABN AMRO Fund, ABN AMRO Ventures, Hegus
Finleap	Saas for banking	6.5	115	FinLeap is an international fintech company builder. It builds technology companies for the banking, insurance, and asset management industries. FinLeap's products and services include plug-and-play SaaS and PaaS solutions such as RegShield, Switch Kit, Open Banking APIs, and SME Banking. Its FinLeap Connect provides access to White Label solutions and seamless integration of FinLeap infrastructure platforms such as Solarisbank, ELEMENT, and Elinvar Investors: Ping An, HitFox Group, Hannover Re, NIBC Bank, SBI Group,Global Voyager Fund, Signal Iduna
Penta Fintech CEO Markus Pertlwieser	Saas for banking	5	54	Acquiredby <u>FinLeap GmbH</u> Penta is a Berlin-based neo-banking platform that offers digital banking and expense management solutions for individuals and businesses. Penta's headquarters is located in Berlin, Berlin. Penta generates \$90.8K in revenue
https://getpenta.com/	Saas for banking	<1mln		per employee Penta has received a total of \$54M in funding. Penta's top competitor is Qonto, led by Alexandre Prot, who is their Co-Founder & CEO. Outbank is a company that develops a mobile app to manage finances. It offers
				secure mobile banking, the overview of fixed costs, budget planning, contract termination and change, and financial analysis. The platform allows users to identify savings potential in their spending and get alternatives to expensive contracts.
Fino Digital Florian Christ CEO & Co-Founder	Saas for banking			Fino Digital is a company that develops products based on bank account and document aggregation and analytics. It provides account switching services, account change aid, deposit account, and address change. Fino's platform combines analytics and machine learning-based risk technology.
Fidor Solutions Fidor.com	Saas for banking			Fidor is a financial technology company providing digital banking solutions. Its offerings include digital Fidor Bank, Fidor Market, Fidor Payments Avenue, and fidorOS platform. The platform enables a digital banking ecosystem for developers and fintech companies who can plug into to offer their own financial products.
Scalable Capital	Roboadvice			Asset Management.
Finanzcheck.de	Realestate service	42		Scout24 acquires all the shares in Finanzcheck.de for €285m Scout24 is a publicly listed company which operates digital marketplaces specializing in the real estate and automotive sectors. The Company operates through ImmobilienScout24 and AutoScout24segments.
Sum-up	POS credits	24L	428L	SumUp provides a mobile point-of-sale application designed to help in card transactions. The Company's end-to-end payments platform offers a card terminal to accept credit and debit cards, using smartphones or tablets, in a secure and cost- effective way, enabling small merchants to accept card payments. Investors: Groupon, LLC, BBVA Ventures, Shortcut Ventures GmbH,Tengelmann Ventures, American Express Ventures, HV Holtzbrinck Ventures, Klaus Hommels, TA Ventures, Venture Incubator, BBVA, U-Start, Rancilio Cube, btov Partners, HPS Investment Partners, Goldman Sachs Private Capital Investing,H14, TPG Sixth Street Partners (TSSP), Bain Capital Credit

			-	1
https://finanzguru.de/ Alexander Michel CEO	mobile aggregator for bank accounts	0.5		In Aug 2019 Finanzguru raised €4,000,000 / Series A from coparion and 3 other investors. In Apr 2018, Finanzguru raised €1,000,000 / Seed from seed + speed Ventures Mobile app - payments, accounts aggregator allows to manage customer's accounts with over 3000 banks and contracts in one app. Finanzguru has a partnership with Deutche Bank.
savedo.de	Marketplcae for retail investments	na		Savedo is a company that provides an online marketplace for retail investment products. It offers an alternative savings platform and allows to invest in safe and high-return term deposits. The platform supports the involved banks and provides standardized account documents and customers service.
Trustbills Joerg Hoerster Founder & CEO	Market place for receivables			TrustBills Marketplace is a company providing a digital auction platform for receivables exchange. It offers an electronic marketplace for selling trade receivables of companies to institutional investors.
Trustbills.com Raisin Raisin.com Tamaz Georgadze Chief Executive Officer & Founder	Market place for deposits	5	205	Raisin is a savings and investments marketplace, connecting retail customers with banks looking to expand or diversify their deposit reach. Its financial marketplace provides users across Europe with a destination to get access to savings products, ranging from overnight flexible savings to long-term deposits, enabling individuals and businesses to access term deposits safely and securely, seamlessly transfer funds as well as manage all their deposits through a single platform. Investors DN Capital, Index Ventures, Goldman Sachs, Thrive Capital,Ribbit Capital, PayPal, Tom Stafford, btov Partners, Avala Capita
Check24 Lasse Schmid Co-CEO	Financial service market place			CHECK24 is a company that provides a comparison platform website. The platform allows its users to compare insurance and financial products, energy and telecommunications tariffs, car rental, flight and hotel prices, travel tours, as well as smartphones, TVs, cameras, etc. Check 24 Investors – Accel Partners
Kapilendo Founder & CEO Christopher Grätz https://www.kapilendo.de/	Equity crowdfunding	1.2	14	kapilendo is an equity crowdfunding platform that connects early-stage startups with accredited investors. Kapilendo's headquarters is located in Berlin, Berlin. Kapilendo generates \$51.7K in revenue per employee Kapilendo has raised a total of \$14.3M in funding. Kapilendo's top competitor is Wefunder, led by Nicholas Tommarello, who is their Co-Founder & CEO.
Gini gini.net Steffen Reitz Co-Founder/CEO	Document workflow			Gini is a provider of a storage application software intended to offer intelligence and structure information within documents. The Company offers a Web-based application program interface that focuses on document management which automatically scans and stores documents through mobile phones and uploaded into archives, enabling users to store documents securely. Investors <u>Deutsche Telekom Capital Partners</u> , Deutsche Telekom Strategic Investments, Main Incubator, German Ministry of Economics & Technology, check24
hypoport.com Ronald Slabke Chief Executive Officer	Broad fintech/Some lending advice	337		Publicly traded company. Hypoports business model is based on its three mutually supporting business units: Private Clients, Financial Service Providers, and Institutional Clients. All three units are engaged in the distribution of financial services, facilitated or supported by financial technology ('fintech'). Operating through its subsidiaries Dr. Klein & Co. Aktiengesellschaft, Vergleich.de Gesellschaft für Verbraucherinformation mbH and Qualitypool GmbH (referred to jointly below as 'Dr. Klein'), the Hypoport Group offers private clients internet-based banking and financial products (providing advice
Bitwala Bitwala.com Ben Jones Chief Executive Officer,	Blockchain/Crypto	1	37.4	Bitwala is a provider of blockchain technology platform intended to be used for international money transfers. The Company's blockchain technology platform bridges the gap between traditional currencies and cryptocurrencies, enabling clients to avail blockchain-based banking services that are faster, cheaper and accessible to anyone in any part of the planet. Investors: Earlybird Venture Capital, Global Brain, Digital Currency Group, coparion, High-Tech Gründerfonds, EASME - EU Executive Agency for SMEs, Earlybird, Sony Financial Ventures, NKB Group

Appendix B. Key Germany fintech Investors

Accel Partners	Earlybird Venture Capital	Index Ventures	Signal Iduna
	European Investment Bank		
AllianzX	(EIB)	Klaus Hommels	Speedinvest
American Express			
Ventures	Finleap	Main Incubator	TA Ventures
		Michael Grabner Media	
Avala Capita	Fincite Ventures	GmbH	Tengelmann Ventures
Bain Capital Credit	Global Voyager Fund	Neulogy Ventures	TEV Ventures
BBVA Ventures	Goldman Sachs	NIBC Bank	Thrive Capital
btov Partners	Groupon	PayPal	Tom Stafford
			TPG Sixth Street
Business Angel	H14	Ping An	Partners (TSSP)
check24	Hannover Re	Raja Hadji-Touma	U-Start
Corsair Capital	Henry Ritchotte	Rancilio Cube	Venture Incubator
Commerz Ventures	Hermann Hauser	Ribbit Capital	

Deutsche Telekom			
Capital Partners	HitFox Group	SBI Group	
DN Capital	HPS Investment Partners	Shortcut Ventures GmbH	
DvH Ventures	HV Holtzbrinck Ventures		

Appendix C. KFW Support Programs

KFW support programs

ERP Start-up Loan-StartGeld	ERP Start-up Loan - Universal	ERP Capital for Start-ups
ERP Start-Up Loan StartGeld benefits from a guarantee issued under the European Community's Competitiveness and Innovation Framework Programme	Loan is available for business founders, company successors, self-employed professionals and small and medium-sized enterprises (SMEs) which have	Loan available for business founders, self-employed professionals and small enterprises which have been active in the market for less
and the Loan is supported by the European Fund for strategic Investments.	been active in the market for less than five years and have funding requirements of up to EUR 25 million.	than three years and do not have enough equity Money could be used:
The loan is available for business founders, self-employed professionals and small enterprises which have been active in the market for less than	In addition, for self-employed professionals, German enterprises, their foreign subsidiaries and joint ventures with high German participation wanting to invest	 For the establishment or takeover of an enterprise, for the acquisition of an active

 five years and require little start- up capital The money could be used for the establishment or takeover of an enterprise, for the acquisition of an interest in an enterprise, this can also be a part- time business if the plan is to achieve full-time self- employment later. For the consolidation of a young enterprise in the first five years specifically: for capital expenditure and working capital Loan with a term of 5 or 10 years. Up to EUR 125,000 in total for capital expenditure and working capital is limited to EUR 50,000. The procedure to apply via local bank of the customer, the bank bears only 20% of the credit risk, KfW bears 80%. This makes it easier for the bank to decide on the loan - provided, of course, that business idea holds the prospect of sustainable economic success. 	 outside Germany The money could be used: For the establishment or takeover of an enterprise, this can also be a part-time business for the acquisition of an interest in an enterprise For the consolidation of a young enterprise in the first five years, specifically: for capital expenditure and working capital Loan with a term of up to 20 years, up to EUR 25 million for capital expenditure and working capital. The loan interest rate is more favourable than for a conventional bank loan; it is fixed for up to 10 years, or even for the entire term. On request, 1 to 3 repayment-free years may be granted; that means that only interest is paid and repayement of the principal starts later. 	 partnership For the consolidation of a young enterprise in the first three years specifically: for capital expenditure and working capital as well as costs of market introduction KfW subordinated loan with a term of 15 years and a maximum loan sum of EUR 500,000. However, the borrower must have a minimum amount of equity. Investments in eastern Germany and Berlin receive special support. The subordinated loan strengthens the equity base and paves the way for debt capital, which is also needed for the financing of start-up or equity base investments. The full amount of the subordinated loan is available in full for seven years before repayment begins. The interest rate is subsidised for the first ten years, of which the first three years are heavily subsidised.
bears only 20% of the credit risk, KfW bears 80%. This makes it easier for the bank to decide on the loan - provided, of course, that business idea holds the prospect of sustainable economic	repayement of the principal starts	subordinated loan is available in full for seven years before repayment begins. The interest rate is subsidised for the first ten years, of which the first three years are heavily
The loan interest rate is more favourable than for a conventional bank loan; it is fixed for the entire term of up to 10 years. On request, two repayment-free years may be granted; that means you only pay interest and start repaying later. KFW recommend this in cases in which the		No collateral is required for the subordinated loan. In case of liability the claims of KfW Bankengruppe rank junior to those of other creditors (subordinated liability).
business cannot be expected to generate profits from the very		

start.	

Appendix D. Germany regional development bank initiatives

Bavaria: LfA Förderbank Bayern, z.B.	Emergency loan (German only)
Baden-Württemberg: L-Bank, z.B.	Liquidity loan (German only)
Berlin: Investitionsbank Berlin (IBB), z.B.	Liquidity Aids (English only)
Brandenburg: Investitionsbank des Landes Brandenburg (ILB), z.B.	SME Credits (German only)
Bremen: Bremer Aufbau-Bank, z.B.	Entrepreneur Ioan (German only)
Hamburg: Hamburgische Investitions- und Förderbank (IFB), z.B.	<u>Credit for Growth</u>
Hesse: Wirtschafts- und Infrastrukturbank Hessen (WiBank), z.B.	Founding and Investing loan
Mecklenburg-Western Pomerania: Bürgschaftsbank MV GmbH, z.B.	BMV Loan (German only)
Lower Saxony: NBank, z.B.	Founding Credit (German only)
North Rhine-Westphalia: NRW.Bank, z.B.	Universal Credit (German only)
Rhineland-Palatinate: Investitions- und Strukturbank Rheinland-Pfalz (ISB), z.B.	Working Capital Loan (German only)
Saarland: Saarländische Investitionskreditbank AG, z.B.	Founding and Investing Financing Programme (German only)
Saxony-Anhalt: Investitionsbank Sachsen-Anhalt (IB), z.B.	<u>SME Loan (German only)</u>
Saxony: Sächsische Aufbaubank, z.B.	Liquiditätshilfemaßnahmen

Schleswig-Holstein: Investitionsbank Schleswig- Holstein (IB.SH), z.B.	Working Capital Loan (German only)
Thuringia: Thüringer Aufbaubank, z.B.	Consolidation Fund (German only)
Further information is also available via the funding database of the Federal Ministry of Economics:	https://www.foerderdatenbank.de/FDB/DE/Home/home.html

Public support measure comparison with other European countries and UK

Public programmes for debt financing in selected countries

UK	Germany	France	Spain	Italy
Funding for Lending Scheme	Start-up Loan	Prêt Participatif d'Amorçage	Companies and Entrepreneurs Facility/Liquidity Facility	Nuovo Plafond PMI Investimenti
National Loan Guarantee Scheme	Start-up Loan (Start Universal)	Contrat de Développement Innovation	ENISA Entrepreneur	Plafond PMI Crediti
Enterprise Finance Guarantee	Entrepreneur Loan	Contrat de Développement Participatif	ENISA Young Entrepreneur	Fondo Centrale di Garanzia
Business Finance Partnership	Entrepreneur Loan (Subordinated Capital)	Prêt Pour l'Innovation	ENISA Competitiveness	
Start-up Loans	Innovation Programme I	Garantie Innovation	ENISA Technology-Based Companies	
	Innovation Programme II	Biotech Garantie	ENISA M&A	
		Garantie de Caution sur Project Innovants	SME Guarantee Programme	
		Credit Mediation Schemes		

12. Bibliography and research sources

On a top level the topic of SME is researched by European commission, The *European Commission* encourages *EU* Member States to learn from each other and to take up measures which have proved to be successful in other Member States. Framework - the 10 principles of the *Small Business Act* (*SBA*). The *SBA* is the *EU* strategy to improve the *business* environment for SMEs

To support and feed the above key enabling factors, the SBA have established 10 principles:

- 1. Education and training for entrepreneurship;
- Efficient bankruptcy procedures and second chance for entrepreneurs;
- 3. Institutional and regulatory framework for SME policy making;
- 4. Operational environment for business creation;
- 5. Support services for SMEs and public procurement;
- 6. Access to finance for SMEs;

- 7. Supporting SMEs to benefit from Euro-Mediterranean networks and partnerships;
- 8. Enterprise skills and innovation;
- 9. SMEs in a green economy;
- 10. Internationalisation of SMEs.

EC publishes various research related to SBA: <u>annual reports</u>, country <u>factsheets</u> and conducts surveys that compare SME developments across European countries one example <u>...Special study accompanying the annual report</u>

- Some research is done by the European Investment <u>fund</u> (EIF.org), which provides guarantees to banks and financing organizations lending to SMEs in Europe.
- More research is carried out by European association of guarantee institutions (AECM.eu) that publishes scoreboards for <u>SMEs</u>
- Another body that provides useful SME insights is European banking association that provides info on SMEs via its <u>Facts and Figures reports</u>
- In Germany the SME research is carried out by Germany key development bank kfw.de which heavily relies on the results obtained by European commission research for its <u>SME Panel</u>
- Deutsche Bundesbank (Germany central bank) overlooks the SME financing conditions and provides some research via its <u>discussion papers</u> and <u>stability reviews</u>
- SME topics are researched by German key commercial banks
 Deutsche bank