Africa

Data Collection Survey on Access to Finance in African Region

Final report

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Japan International Cooperation Agency（JICA）

Deloitte Tohmatsu
Financial Advisory LLC

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FIGURES AND TABLES

Abbreviations

Abbreviations	
AfDB	African Development Bank
BOG	Bank Of Ghana
EDIF	Export Development and Investment Fund
EIB	European Investment Bank
FSD	Financial Sector Deepening Kenya
GCB	Ghana Commercial Bank
IMF	International Monetary Fund
KBA	Kenya Bankers Association
KCB	Kenya Commercial Bank
KNBS	Kenya National Bureau of Statistics
KNCCI	Kenya National Chamber of Commerce and Industry
NBSSI	National Board for Small Scale Industries
NPL	Non-Performing Loan

Chapter 1 Project Overview

1.1 Objectives and background

Goal 8 (Promote Inclusive and Sustainable Economic Growth and Decent Work) and Goal 9 (Promote Resilient Infrastructure, Promote Inclusive and Sustainable Industrialization and Promote Innovation) in the Sustainable Development Goals (SDGs)), Goal 17 (Strengthening the means of implementation for sustainable development, revitalizing global partnerships) achieve GDP growth of 7% or more per least developed countries and double the industrial sector share in the region Goals that are difficult to achieve on the lines of development cooperation, such as achieving full and productive employment, promoting and expanding financial access for all, and doubling the share of least developed countries in world exports. It is necessary to introduce innovative ways of cooperation

According to the World Bank's report on access to finance, about half of the 400 million companies, which numbers about 180-220 million, in developing countries have financial access challenges, meaning that global financial needs of US $ 2.1-2.6 trillion is not met yet. This supply-demand gap is caused by the problems found on both the demand side (enterprises) and the supply side (financial institutions, etc.). Generally speaking, SMEs are facing obstacles such as requirement of financial statement preparation and real estate collateral, high procedural costs and interest rates, and time it takes for financial institutions to make a loan decision which is usually longer than decision on lending to big corporations. On the supply side, SME financing is recognized as a high-risk transaction because of the asymmetry of information and the coverage and reliability of corporate credit information. In addition, despite the high risk of SME financing, size of the loan per transaction is small and the transaction cost is relatively high, which raises problems with profitability of the service. Under such circumstances, as mentioned later, transaction process has been simplified for individuals, and alternative lending services such as micro-financing and lending services based on the credit analysis utilizing big data / Artificial Intelligence (AI) have been implemented. On the other hand, financial access to SMEs in developing countries where funding needs exceed US $ 10,000 is still limited in view of the situation described above, and it is often called “missing meddle” meaning that the financial opportunities for SMEs is missing while there are more access to finance for large enterprises, farmers and low-income earners.

On the other hand, financial services using digital data and new technologies have become globally popular these days. These data include not only conventional data namely accounting information, financial transaction information, sales, and bank accounts, but also alternative data including social media, mobile terminal information, and personal information. The World Bank Group and the International Monetary Fund (IMF) have identified the risks and challenges of providing financial services using new financial technologies (fintech), and in October 2018, they announced the Bali Fintech Agenda which brings together and advances key issues for policymakers and the international community to consider as individual countries formulate their policy approaches regarding Fintech related services. In recent years, according to the Ministry of Internal Affairs and Communications, 58.7% of companies in Japan use cloud services in 2018, compared with 33.0% in 2013, and this trend is expected to continue in the future.

In addition, although there are issues for further dissemination, various new technologies and Fintech services are implemented not only for finance and accounting areas such as cloud accounting, but also for other functions that are essential to SME financial management such as funding, purchase orders, and payment.

In light of the above background, the study firstly identifies the local financial needs and issues that the financial institutions face in Ghana and Kenya as well as alternative financial services focusing on lending service in order to explore the direction of countermeasures to improve access to finance of SMEs in the region.

1.2 Research structure

1.2.1 Survey flow

In this study, hypotheses were constructed based on an analysis of corporate finance bottlenecks and financial methods observed in Ghana and Kenya, and verified through field surveys to form project proposals.

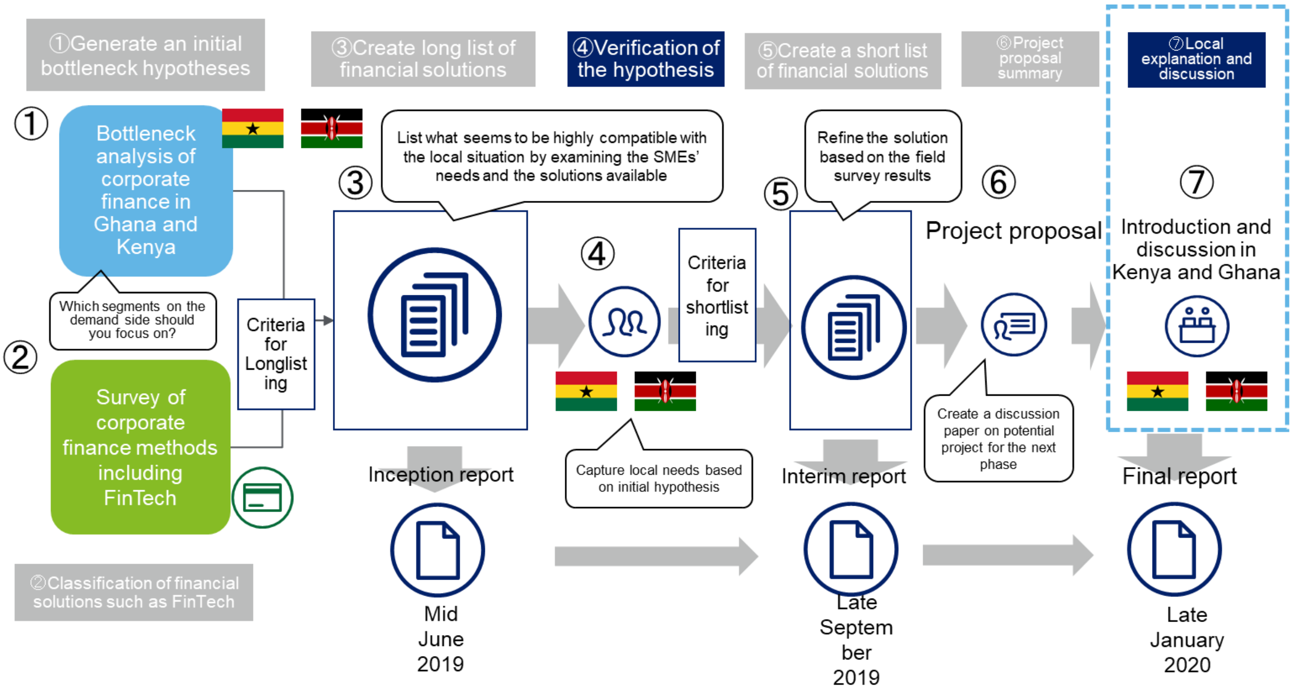

Figure 1.2.1 Process of the survey

1.2.2 Analysis method

Firstly, the survey analysis 1) the current status of financial sector, 2) current status of SMEs, and 3) legal and policy framework related to financial services based on desktop study which includes the review of the final report of "Data Collection Survey on the SMEs/Entrepreneurs Support in the African Countries", the latest survey conducted by JICA on this topic. Then, the survey generates the hypothesis of the bottlenecks on access to finance of SMEs by identifying the obstacles that each of the above sector faces

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1.3 On-site survey schedule

1.3.1 The first on-site survey (2019 July 23- August 9)

Date	Organization	Place
July-23（Tue)	・ Flight to Accra	Accra

	・ JICA Ghana ・ Deloitte Ghana	
July-24（Wed）	・ NBSSI ・ Bayport Savings and Loans	Accra
July-25（Thu）	・ Nkulenu　Agro-processing Company (food processing) ・ InterZen MicroFinance Limited	Accra
July-26（Fri）	・ Solution Oasis (Consumer goods) ・ Jireh Microfinance Limited ・ Bank of Ghana	Accra
July-29（Mon）	・ NBSSI Greater Accra regional office	Accra
July-30（Tue）	・ Association of Small Scale Industries (ASSI) ・ Omni BSIC Bank	Accra
August-1（Wed）	・ GCB Bank ・ Private Enterprise Federation ・ Accents and Arts (Home decoration)	Accra
August-2（Thu）	・ NBSSI ・ JICA Ghana ・ Flight to Nairobi	Accra
August-5（Mon）	・ JICA Kenya ・ Deloitte Kenya	Nairobi
August-6（Tue）	・ Jinya Foods Limited (Retail service) ・ KCB Bank	Nairobi
August-7（Wed）	・ United Paints (Chemical) ・ KIBT ・ NCBA Bank	Nairobi
August-8（Thu）	・ Financial Sector Deepening Trust ・ Equity Bank	Nairobi
August-9（Fri）	・ Kenya Women Microfinance Bank ・ KCCI ・ Tumaini supermarkets (Wholesale) ・ JICA Kenya	Nairobi
August-10（Sat）	Flight back to Tokyo	Tokyo

Table 1.3.1 The first on-site survey schedule

1.3.2 The second on-site survey (2019 Nov 18- Nov 29)

Date	Organization	Place
11 月 18（Mon）	・ Flight to Accra	Accra
11 月 19（Tue）	・ JICA Ghana	
11 月 20（Wed）	・ Omni BSIC Bank	Accra

11 月 21（Thu）	・ Ghana Association Of Bankers ・ GCB Bank ・ Flight to Nairobi	Accra
11 月 22（Fri）	・ MASLOC ・ JICA Nairobi	Accra Nairobi
11 月 25（Mon）	・ NCBA Bank	Nairobi
11 月 26（Tue）	・ Equity Bank ・ Kenya Bankers Association	Nairobi
11 月 27（Wed）	・ Kenya Commercial Bank	Nairobi
11 月 28（Thu）	・ KNCCI ・ Kenya Women Microfinance Bank ・ Flight to Tokyo	Nairobi
11 月 29（Fri）	・ Arrive in Tokyo	Tokyo

Table 1.3.2 The second on-site survey schedule

1.4 Consultant team structure

This survey team consisted of the consultants from Infrastructure & Public Sector Advisory team of Deloitte Tohmatsu Financial Advisory LLC (DTFA) who have rich experience in providing consulting to public sector clients, including JICA's technical and financial cooperation, and the consultants from financial services industry team of DTFA with expertise and experience in consulting in the financial sector.

In addition, Deloitte's local office, which provides auditing, tax, and consulting services in the surveyed countries, also participated to provide mainly information gathering, liaison and coordination tasks related to surveys and pilot activities.

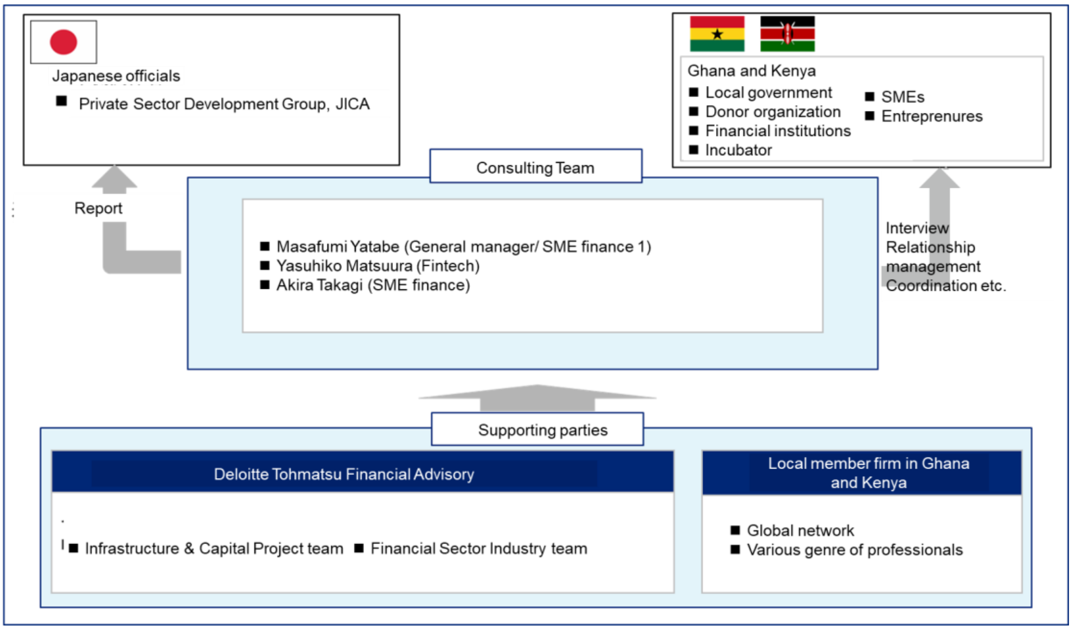


Figure 1.4.1 Research team structure

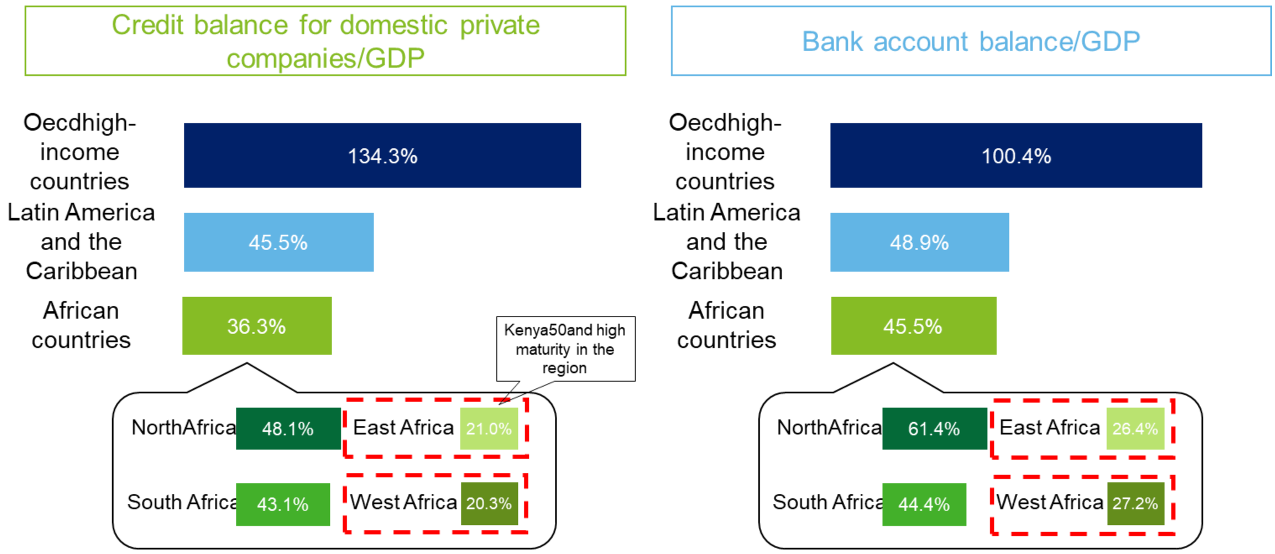
Chapter 2 Result of Desktop survey and bottleneck analysis

2.1 Introduction - Access to finance in Africa

2.1.1 Depth and penetration of financial institutions in Africa

The maturity and penetration of financial institutions in the African region are lower than those in OECD high-income countries, Latin America and the Caribbean, and the maturity and penetration of financial institutions in East and West Africa is particularly low among the countries in African region.

According to the African Development Bank, African countries have lower share of credit to domestic private companies to GDP compared to high-income countries and Latin America, and there is much room for improvement in the region, especially in East and West Africa (Figure 2.1.1). Similarly, the ratio of bank deposits to GDP is also remarkably low in East and West Africa, indicating that the penetration of deposit services in this region is lower than in other regions such as OECD high-income countries. On the other hand, it is a feature of the region that financial access has been greatly improved in recent years due to the spread of mobile banking.



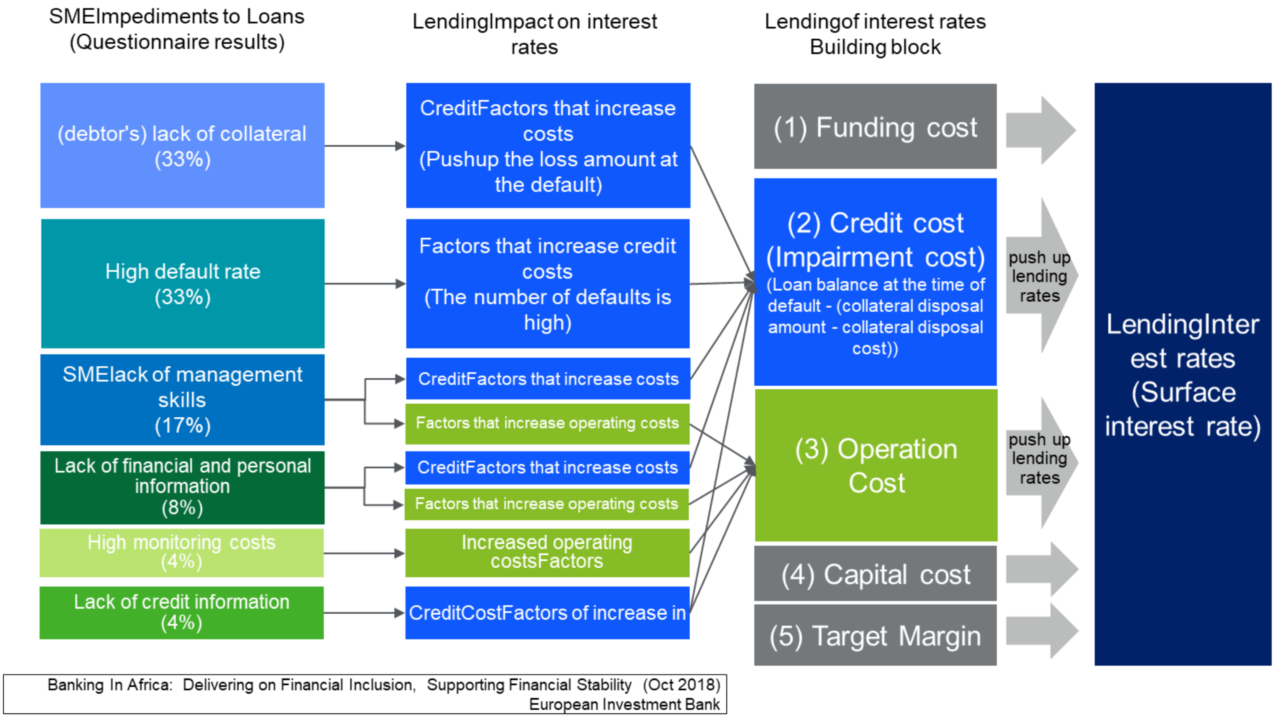
Reference) [アフリカ開発銀行（AfDB），2015]

Figure 2.1.1 Maturity and penetration of financial institutions in Africa

2.1.2 Obstacles to SME finance in Sub-Sahara Africa

The low credit balance in the Sub-Saharan region is considered to be due to insufficient capacity of debtors, inadequate protection of creditors' rights, and lack of information from credit bureaus. According to the results of interviews with financial institutions in the Sub-Saharan Region, the main obstacles to SME financing in the region were "lack of collateral (33%)" and "high default (default) rate (33%)" ([European Investment Bank (EIB), 2018]). Insufficient collateral and a high default rate are factors that increase impairment costs, thereby raising lending rates set by financial institutions ([European Development Bank (EIB), 2018]).

Furthermore, it is pointed out that in the Sub-Saharan Africa region, the operating costs of financial institutions are higher than in other regions due to the poor business environment, legal system, and smaller market size, which ultimately affects lending rates[1].



Reference） **[欧州開発銀行（EIB），2018]**をもとにJICA research team

Figure 2.1.2 Factors that hinder SME lending in Africaand the impact on lending rates

2.2 Result of Desktop survey

At Ghana, it is speculated that there is a vicious cycle where corporates' lending needs not being cultivated, and the high NPL ratio requiring financial institutions to lend at high interest rates.

On the other hand, in Kenya, although lending interest rates have been curbed by policy (as of July 2019), non-performing loans are increasing year by year, and it can be said that there are concerns about future credit crunch. Under such circumstances, in Kenya, M-PESA[2] supplements individual funding liquidity, and especially in micro businesses with BtoC format, huge payment history by M-PESA as daily transaction information with customers since such information can be used as substitute data for consideration of credit evaluation and debtor rating, it is presumed that cooperation with this service will be important in the future.

The results of desktop survey regarding (1) Appearance of financial market, (2) Legal system, policy and infrastructure related to financial services, (3) Current state of supply side (financial institutions, etc.) of corporate finance, (4) Current state of demand side of corporate finance (companies/ borrowers) are as follows.

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[1] A study by the African Development Bank (AfDB) in 2015 showed that the ratio of financial institutions' overheads to total assets by region is 1.5% in OECD high-income countries, 1.7% in North Africa, and 5.4% in Sub-Saharan Africa （ [アフリカ開発銀行（AfDB），2015]）

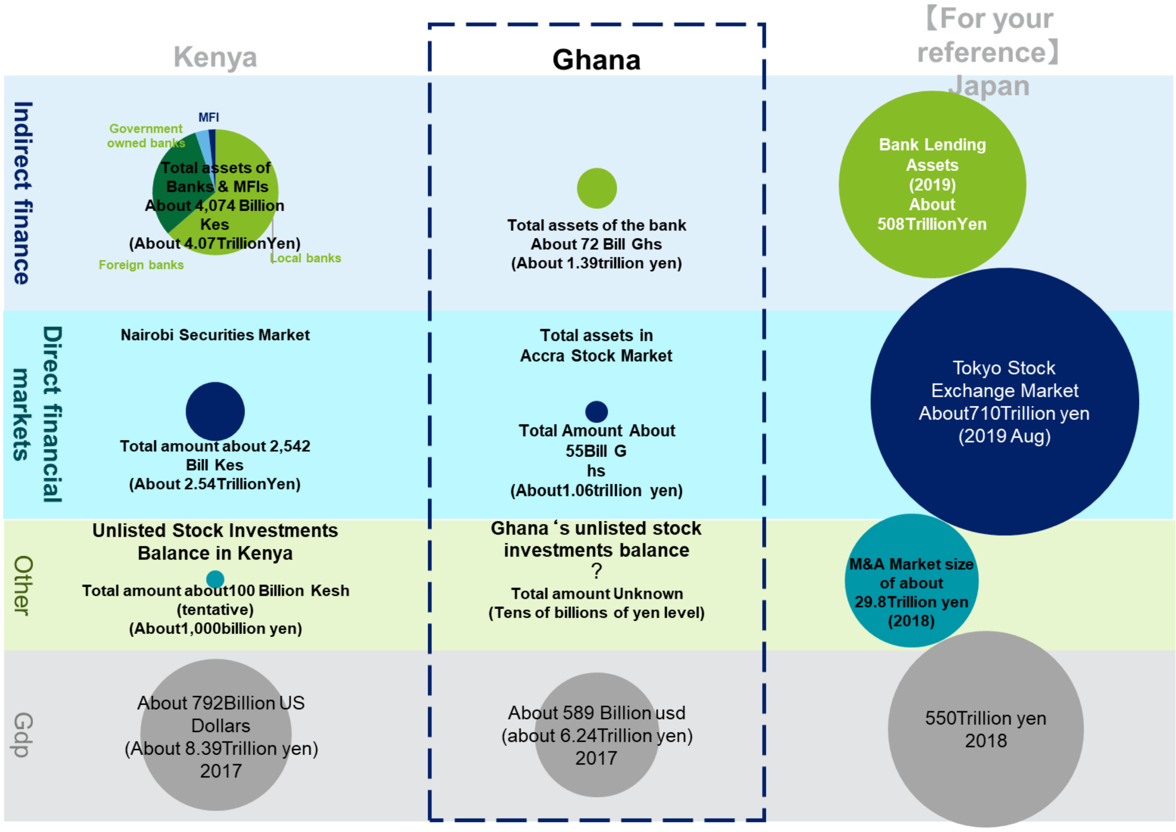
[2] M-PESA is a mobile payment platform for P2P provided by Kenya's telecom operator Safaricom, and has become very popular since its launch in 2007, capturing the need for small remittances to migrant workers' families. In addition to remittances, we also provide deposit, borrowing (micro finance), and settlement services at restaurants and other stores. Over-the-counter payment service (Lipa na M-PESA) was launched in 2017 and currently has over 100,000 stores. [Safaricom, 2018]

2.2.1 Ghana

(1) Outlook of financial industry in Ghana

Figure 2.2.1 compares the size of assets in the indirect and direct financial markets in Kenya, Ghana, and Japan. The total assets in Ghana (approximately 72 billion Ghana cedi = approximately 1.39 trillion yen) is less than a quarter of the country's GDP (approximately US $ 58.9 billion = approximately 6.24 trillion yen) in 2017. Therefore, it is considered that there is much room left for long-term growth of indirect finance in Ghana.

On the other hand, based on the Banks and Specialized Deposit-Taking Institutions Act issued by the Ghanaian government in 2017, guidelines related to credit risk, market risk, and operational risk were developed, and in the same year financial institutions' minimum capital requirements and minimum capital ratio was raised. Due to the mergers and acquisitions of some banks accompanying this event, the reorganization of the financial industry became active, with the number of banks in the country decreasing from 34 to 23 in 2018, and the disruption of the market as a whole is expected to continue for a while.

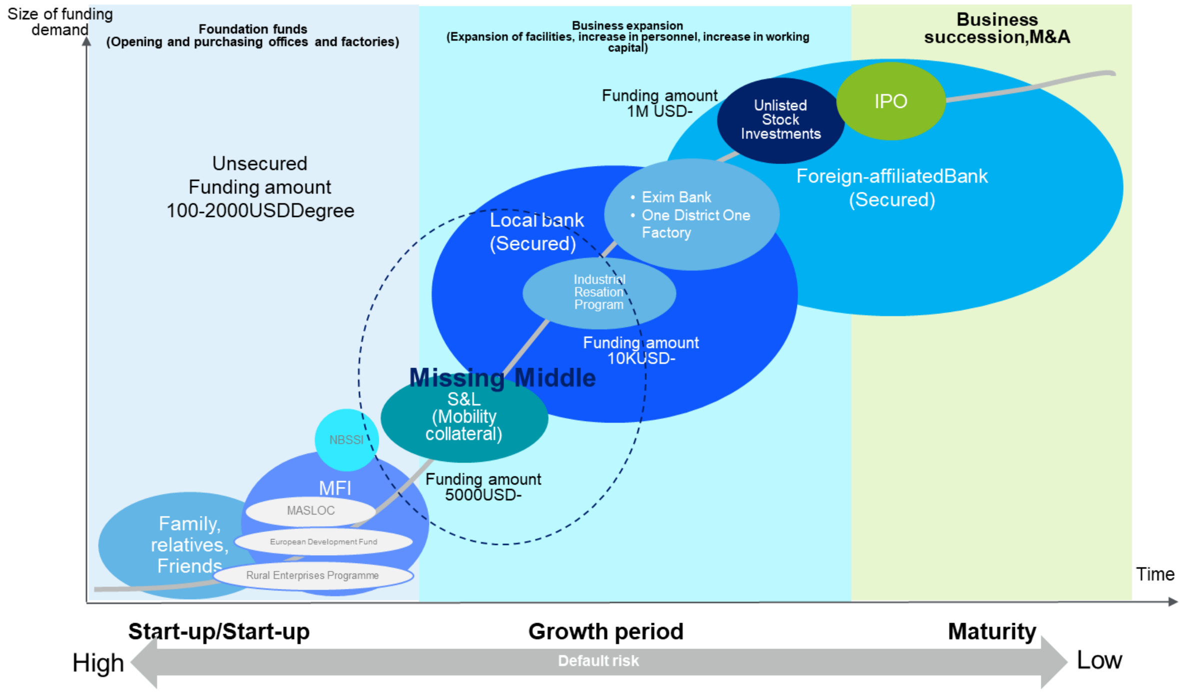


Reference) JICA research team

Figure 2.2.1 Financial market in each countries

In addition, looking at the distribution of financial services in Ghana according to the life cycle of companies (Figure 2.2.2), there are financial institutions that cover areas called missing middles, but the risk of bad debt is high and Due to the high transaction costs, the market is not very profitable. According to the World Bank, although the economic structure and context differ from country to country, the common issues in the market called the missing middle are: 1) the SME market is growing explosively, and the supply of funds is not keeping up;) Excludes certain business operators, such as the fact that the definition of SME is ambiguous depending on the government or bank, so that the customer attributes are diverse, and 3) Female managers do not have the ownership of the collateral required for borrowing loans. Have pointed out that there are cases. In hearings with financial institutions in Ghana, it was pointed out that the diversity of the SME market was a particular issue in financing SMEs.

In addition, Bayport, a Savings and Loans (S & L) company, said that many S & L customers are not aware of loan repayment, and like Ghana and other developing countries, KYC, commercial law, ID (passports, national insurance, licenses) In markets where legislation requiring loan repayment has not yet been developed, such as in the market, the importance of designing an easy-to-use service based on the level of financial literacy of customers has been emphasized. Vehicle Loans, in which vehicles provided by the company are collateralized by real estate, are easier for SME operators to provide collateral than real estate collateral, and collaborate with a vehicle registration DVLA (Driver and Vehicle Licensing Agency). It has successfully supplemented its management and creditor tracking system, and its share of this product is growing.



Reference）現地調査をもとに JICA research team

Figure 2.2.2 Corporate life cycle and players in the financial industry in Ghana

In addition, while mainly domestic banks such as Ghana Commercial Bank (GCB) provide loans bigger than US$10,000 during the growth period of borrowing companies, there is little incentive for them to increase loans to SMEs, because those enterprises tend to have high risk and lower profit compared to matured companies. This situation is largely affected by the cost structure in which the profit banks can make is ultimately higher when they invest their funds in treasury bills rather than investing in SME loans. In fact, while the interest rate set for loans to SMEs is higher than the interest rate itself that would be obtained if funds held (mainly deposits) were managed with treasury bills, or government bonds, it is considered investing in government bonds are more profitable than financing SMEs when operating costs and the credit costs necessary to SME loans are taken into account.（Figure 2.2.3）。

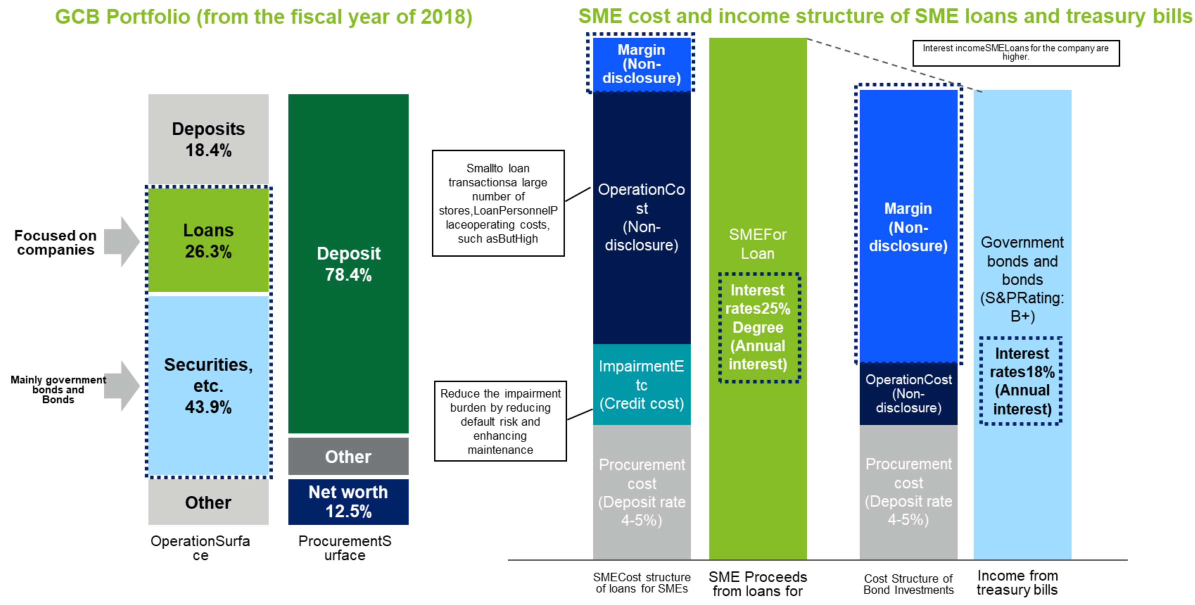


Figure 2.2.3 Cost structure at financial institutions（Ghana）

(2) Legal systems, policies, and infrastructure

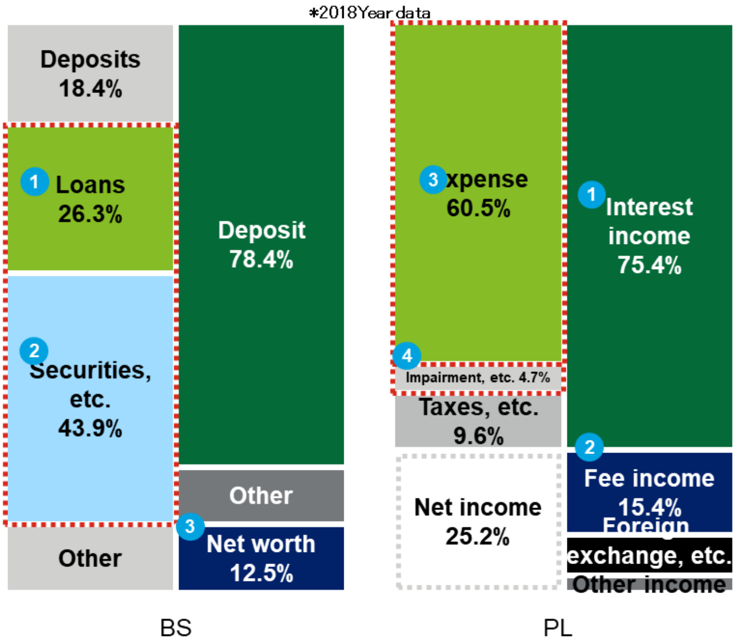
In Ghana, the central bank has recently raised the minimum capital of financial institutions. The minimum capital of the bank is from 120 million Cedis (about 2.3 billion yen) to 400 million Cedis (about 7.66 billion yen), and microfinance is from 60 to 100,000 Cedis (about 1.1 to 1.9 million yen) to 2 million Cedis. As a result of implementation of the minimum capital requirement, the number of banks in Ghana were reduced from 34 to 23 in 2018, and half of 360 microfinance companies has not met the minimum capital (MFI is expected to accelerate its restructuring in the future). Ghana is also active in attracting foreign capital, and the establishment of companies wholly owned by foreign corporations and individuals is permitted by law. The percentage of individuals holding bank accounts in Ghana remains at 42.3%, and payment channels are mainly debit card payments, while mobile payments have increased rapidly in recent years.

(3) Financial service provider (Financial institutions)

To grasp the situation of the banks in Ghana, the survey investigated one of the biggest commercial banks in the country ("the company"). Beginning with commercial banking for merchants, the company now has a wide range of services for individuals, SMEs, and large corporations.

1) Asset structure and cost structure

An analysis of the capital structure of the Ghanaian Commercial Bank (GCB) shows that the loans to assets ratio is smaller than that of deposits which indicates there is an extra room in their lending capacity (Figure 2.2.4). Furthermore, the ratio of securities (43.9%) is larger than loans, and it is considered that incentives are working on securities investment (government bonds, etc.). Looking at the profit structure, operation costs account for 60.5% of expenses, suggesting that there is room for cost improvement. Also, considering the high NPL ratio (6.0%) and impairment costs which is lower than the NPL ratio (4.7%), it seems that impairment losses have not progressed, and there is a risk of impairment in the future.

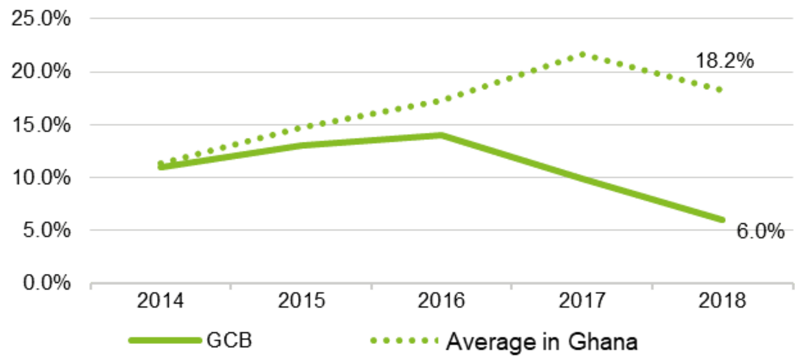


Reference） The company's annual report

Figure 2.2.4　B/S and P/L of THE COMPANY（2018年度）

2） Non-Performing Loans

Although the THE COMPANY had a high NPL of 14% until 2016, it has fallen to 6.0% in 2018, suggesting that the loan portfolio is being converted (Figure 2.2.5). On the other hand, the banking industry's overall NPL in Ghana is still at a high level, indicating that lending risk also remains high in the future.

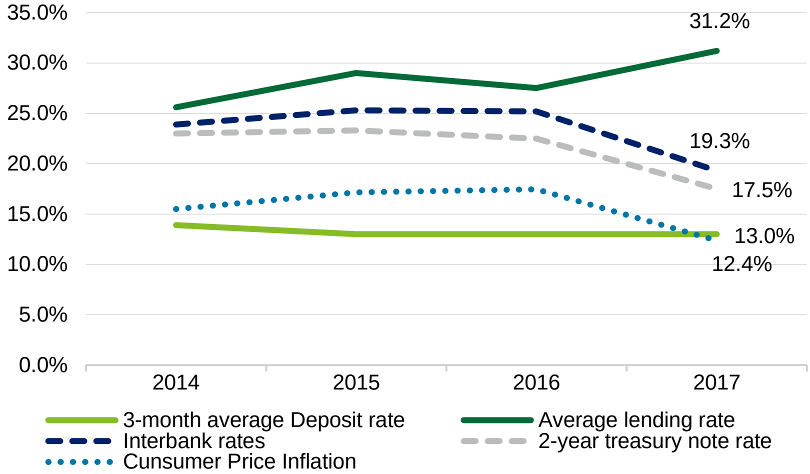


Reference） The company's annual report、IMF

Figure 2.2.5　NPL trend of THE COMPANY and the industry average in Ghana

3） Lending rate

As mentioned above, the "lack of collateral" and "high default rate" of SMEs in the African region are one of the factors raising interest rates in the market. But in Ghana, in addition to those factors, the high inflation rate is affecting the average loan interest rate being at a high level of over 30%. Also, it is found that the divergence between the lending interest rate (31.2%) and the deposit interest rate (13.0%) is large, indicating that banks are lending at high interest rates (Figure 2.2.6).



Reference） [ガーナ中央銀行（BOG），2017]、 [IMF, 2019]

Figure 2.2.6 Interest trend of THE COMPANY and the industry average in Ghana

(4) Financial service user (SMEs)

1) Business accountability

Regarding the preparation of financial statements, Ghana has no obligation to disclose or audit financial and accounting information for individuals and small businesses that have not registered as companies, and only 46% of companies surveyed use double-entry bookkeeping. (International Federation of Accountants, 2014). JICA's baseline survey on the national KAIZEN project conducted from September 2015 to January 2019 shows that among the 23 companies that have a business plan, Some survey results show that only 11 companies (50% or less) stayed. In addition, while companies' borrowing from banks account for less than 25% of each industry in the country, companies are currently required to pledge collateral of which the amount is 2-3 times bigger than the amount of loans ([World Bank, 2018]).

2) Finance

The use of bank loans for procuring working capital in Ghana is at the same level as the global average, but more working capital is assumed to be required especially in the industries involved in construction projects for government, of which collection process of sales is likely to be delayed ([World Bank, 2018]).

Region	Bank loan	Account payable
All Countries	27.7	26.0
East Asia & Pacific	26.5	20.9
Indonesia	32	31.1
Sub-Saharan Africa	22.1	24.5
Ghana	25.3	36.5
Kenya	36.2	40.4

Reference） **[世界銀行, 2018]**

Table 2.2.1 Percentage of SMEs that use Bank loan or Account payable as a means of procuring working capital by Region

According to a study conducted by the World Bank, the percentage of Ghanaian companies that raise capital through bank loans is 12.6%, which is higher than the Sub-Saharan region average (9.2%). On the other hand, 76% of Ghanaian companies use their own capital for refurbishing their business, exceeding the global and Sub-Saharan region averages (71.9% and 74.4%, respectively)

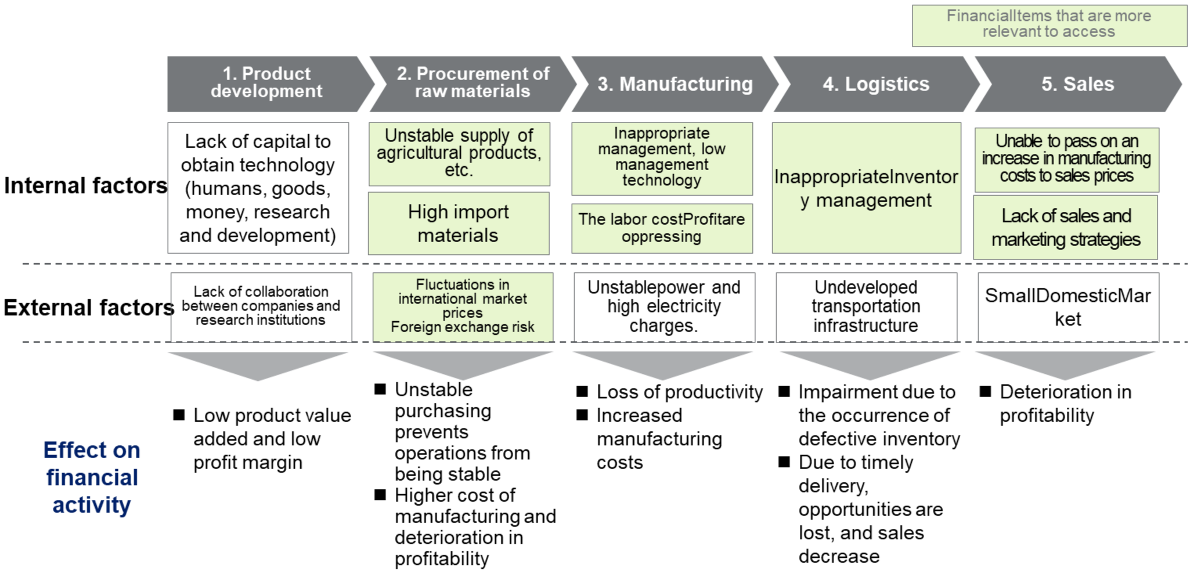
Region	Bank loan	Own capital
All Countries	13.7	71.9
East Asia & Pacific	10.1	78.4
Indonesia	12.8	66.0
Sub-Saharan Africa	9.2	74.4
Ghana	12.6	76
Kenya	20.7	67.7

Reference） **[世界銀行, 2018]**

Table 2.2.2 Percentage of SMEs that use bank loans or equity capital as a means of procuring capital funds (by Region)

3） Value chain analysis

Taking into account the analysis of the report below and the analysis of the desktop survey conducted in this survey, it can be said that SMEs in the manufacturing industry in Ghana are forced to operate in a severe business environment. According to JICA's "Project for Improving Quality and Productivity by Enhancing BDS for Small and Micro Enterprises" in 2012, the manufacturing industry in Ghana is still low in productivity and inferior in quality compared to imported products. It has been pointed out that there is still room to improve profitability and improve profitability in Ghana's manufacturing industry. Also, according to the Ghana Industry Association's 2018 survey of businesses in Ghana, the management issues of the manufacturing industry in Ghana are as follows: 1) High electricity costs, 2) Imported materials, 3) Tax payment schemes. Above all, it has been pointed out that tax payment schemes are complicated and of many types, and there are issues with unstable supply chains dependent on imports and inefficient administrative infrastructure. Lastly, there is a risk of fluctuations in the international exchange rate as a common issue for the service sector and the manufacturing industry, and there is room for improvement in economic infrastructure as well ([Assicuation of Ghana Industries, 2018]). (Figure 2.2.7).

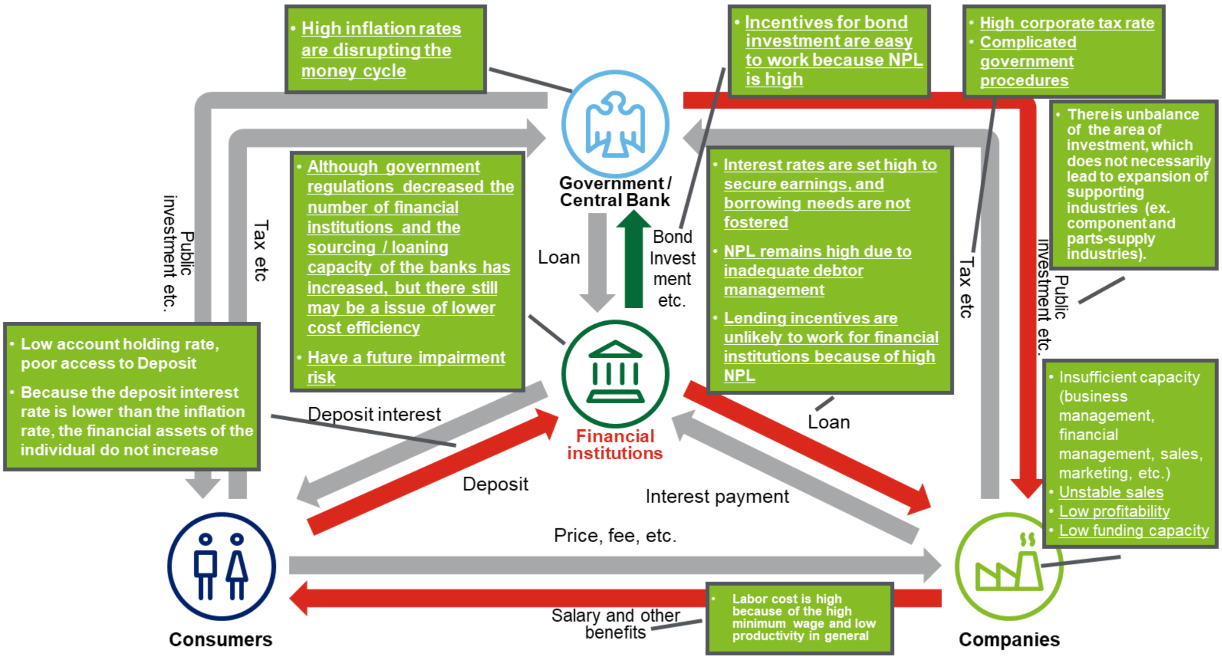


Reference）［国際協力機構（JICA）, 2017］、および現地調査に基づき JICA research team

Figure 2.2.7 Value chain analysis of manufacturing and surrounding services（Ghana）

(5) Bottle-neck analysis (hypothesis)

Based on the results of the desktop survey ((1) to (4) above), a bottleneck analysis of corporates' access to finance in Ghana was conducted as shown in Figure 2.2.8. The figure implies that Ghana is presumed to be in a vicious cycle, with high lending rates not raising corporates intention to fund their business through bank loans and with a high NPL ratio, which requires financial institutions to lend at high interest rates.



Reference）JICA research team

Figure 2.2.8　Bottle-neck analysis on corporate finance（Ghana）

2.2.2 Kenya

(1) Overview of the financial market in Kenya

Figure 2.2.9 compares the size of assets in the indirect and direct financial markets in Kenya, Ghana and Japan. Given that the ratio of banks' total assets to GDP in 2016 was 65.61% globally on average, 242.19% in Hong Kong and 3.49% in Afghanistan, the total amount of the assets of banks in Kenya as of 2017 is approximately half of the country's GDP (approximately US $ 79.2 billion = approximately 8.39 trillion yen), which implies that indirect finance sector in Kenya plays a major role ([theGlobalEconomy.com, 2016]).

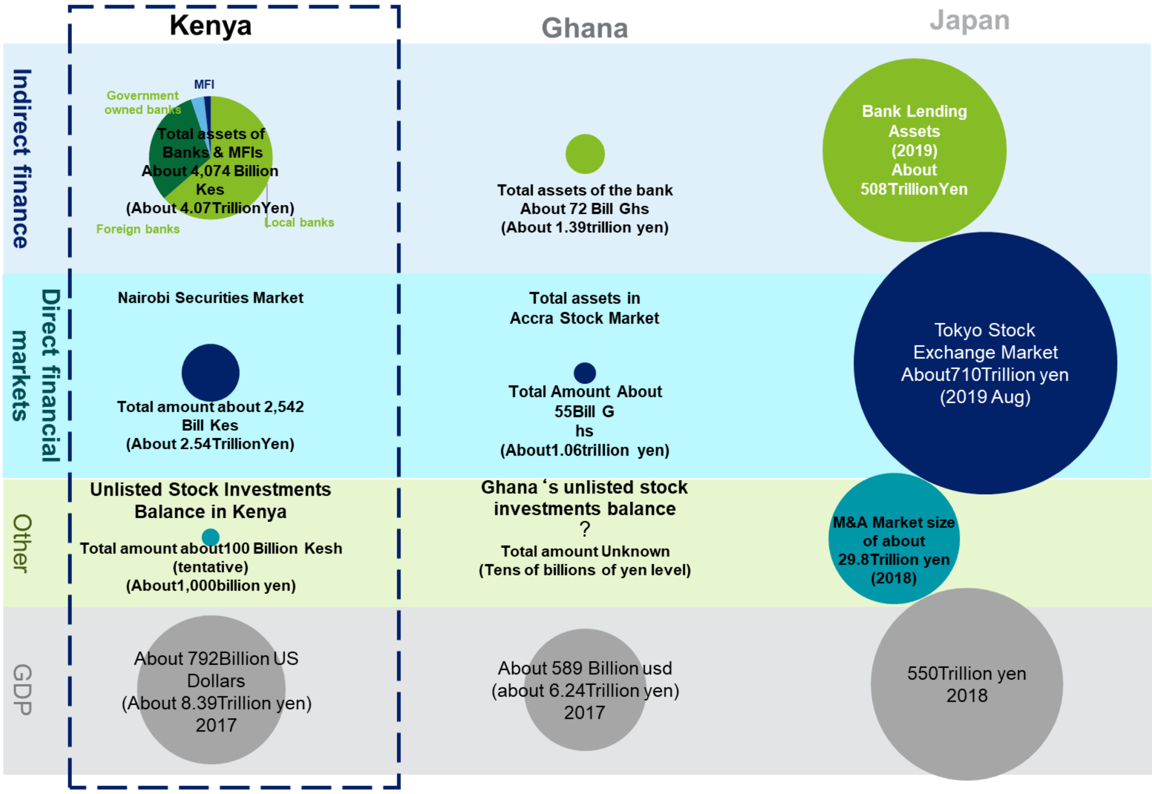
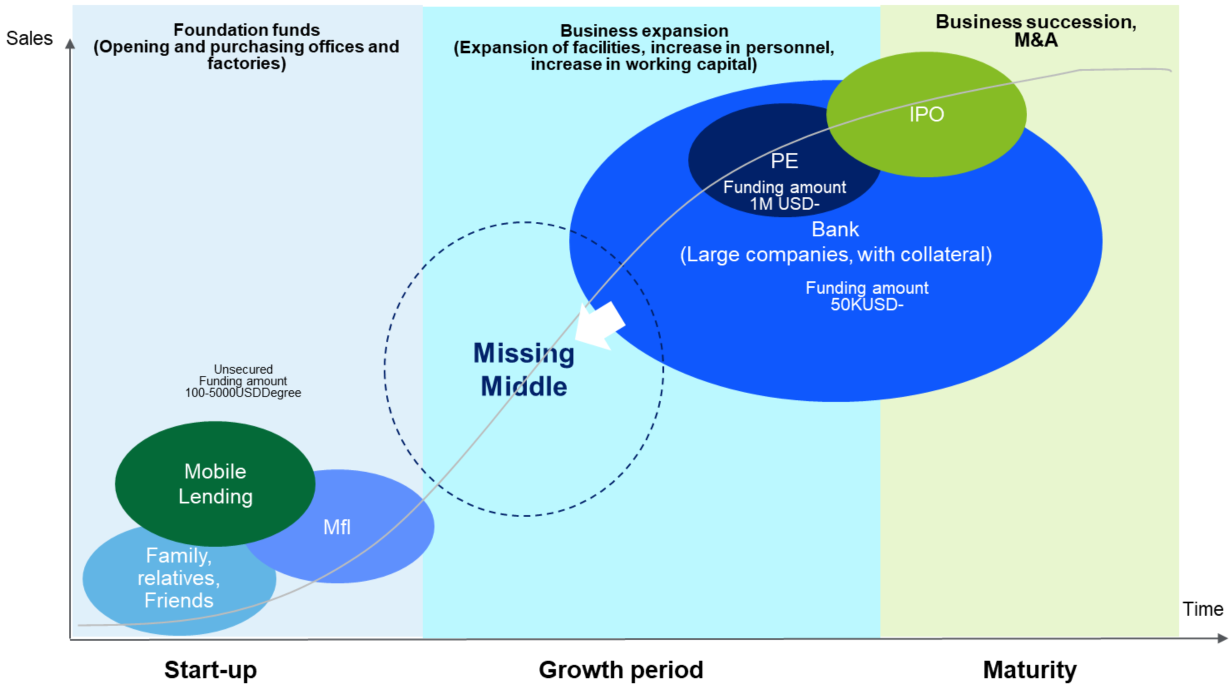


Figure 2.2.9 Financial market in each countries

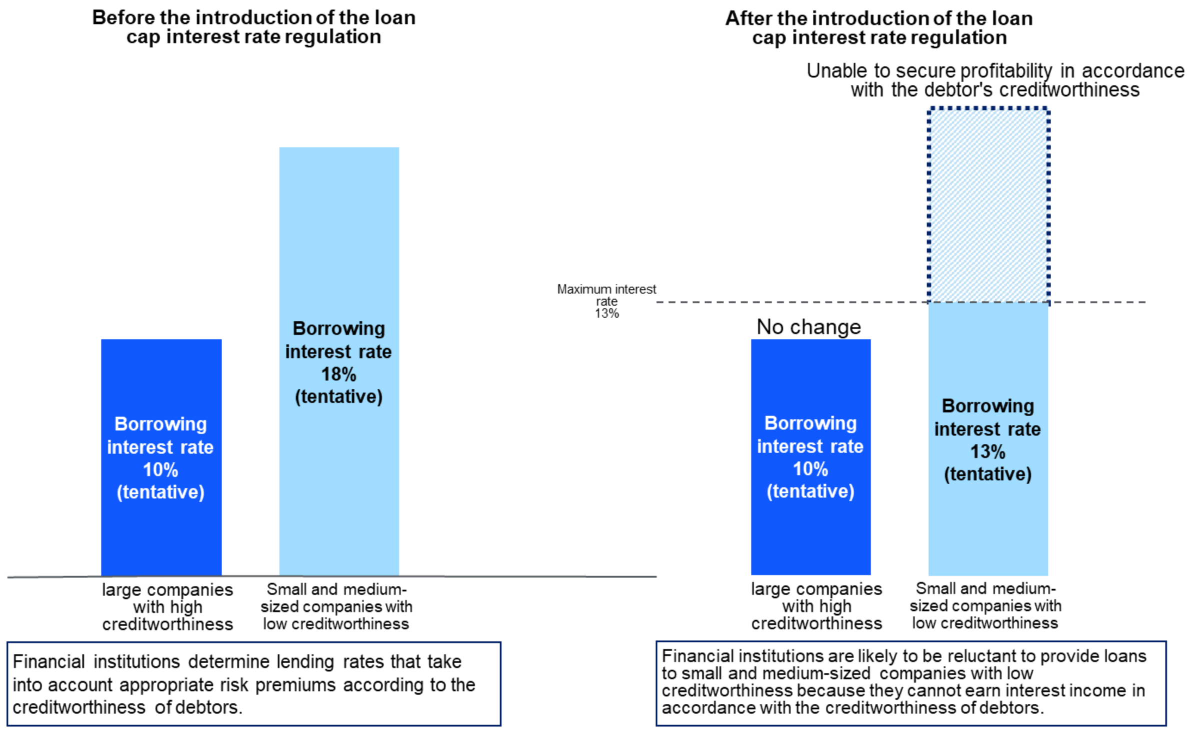
Figure 2.2.10 Corporate Life Cycle and Financial Players (Kenya) summarizes the distribution of financial services in Kenya according to the corporate life cycle. Financing through unsecured financing in the country is limited to several thousand US dollars, and if secured and sufficient repayment capacity is confirmed, it is possible to raise more than US $ 50,000. It turns out that the number of players covering the range (missing middle) in the meantime is limited. In fact, in Ghana, the category of Savings and Loans has been set as a financial institution under the control of the central bank, and there are about 37 players, while in Kenya, financial institutions controlled by the central bank as indirect financial institutions are classified only as MFI or commercial banks.



Reference）現地調査をもとに JICA research team

Figure 2.2.10 Corporate life cycle and players in the financial industry in Kenya

In September 2016, the interest rate cap was introduced in September 2016, and banks were capped at an official interest rate set by the Central Bank of Kenya (9.00% as of September 23, 2019) + 4%. This has also greatly affected banks' attitudes toward SME financing. The regulation was abolished on November 5, 2019, but with the introduction of the maximum interest rate regulation, it has become difficult for financial institutions to set interest rates according to the creditworthiness and risk of debtors, and small and medium-sized companies with low creditworthiness. There has been a history of local banks making loan decisions more carefully. In other words, it is highly likely that SMEs and micro-enterprises with low creditworthiness that had previously been able to raise funds only at high interest rates would have difficulty on financing from financial institutions after the introduction of this regulation.



Reference）現地調査をもとに JICA research team

Figure 2.2.11 Before and after the introduction of interest cap

(2) Legal systems, policies, and infrastructure

In Japan, there are the Banking Law, the Bank of Japan Law, the Financial Instruments and Exchange Law, the Money Lending Business Law, and the Collateral Rights Law as financial laws. In connection with monetary policy, the Bank of Japan stated that the philosophy of the Bank of Japan's monetary policy was to “contribute to the sound development of the national economy by stabilizing prices”. The government has set the "target for price stability" as a 2% year-on-year increase in consumer prices, and has set a monetary policy to achieve this as soon as possible. In terms of financial infrastructure in Japan, the number of bank branches established per 100,000 people is 34.01 (2018), making it one of the highest levels in the world. Also, the number of ATMs installed per 100,000 people was 127.38 in 2018, a slight decrease from 130.93 in 2010 ([IMF, 2018]).

On the other hand, in Kenya, the main financial laws are the Central Bank of Kenya Act (2015), Banking Act (2015), Microfinance Act (2006), Credit Reference Bureau Regulations (2013), The Money Remittance Regulations (2013) etc.. Under the Central Bank of Kenya Act, the Central Bank of Kenya supervises banks and other financial institutions as a central bank.

In addition, the government of Kenya has set a maximum interest rate on lending since September 2016 with the aim of increasing the liquidity of loans as a recent policy, but it was abolished in November 2019, and lending by financial institutions in the future is now expected to be stimulated. Under foreign investment regulations, banks, financial institutions, the Government of Kenya, foreign governments, state-owned enterprises, foreign companies licensed by financial institutions in the country, central bank, and holding companies approved by the central bank are the only ones that are able to own more than 25% of the financial institution's shares.

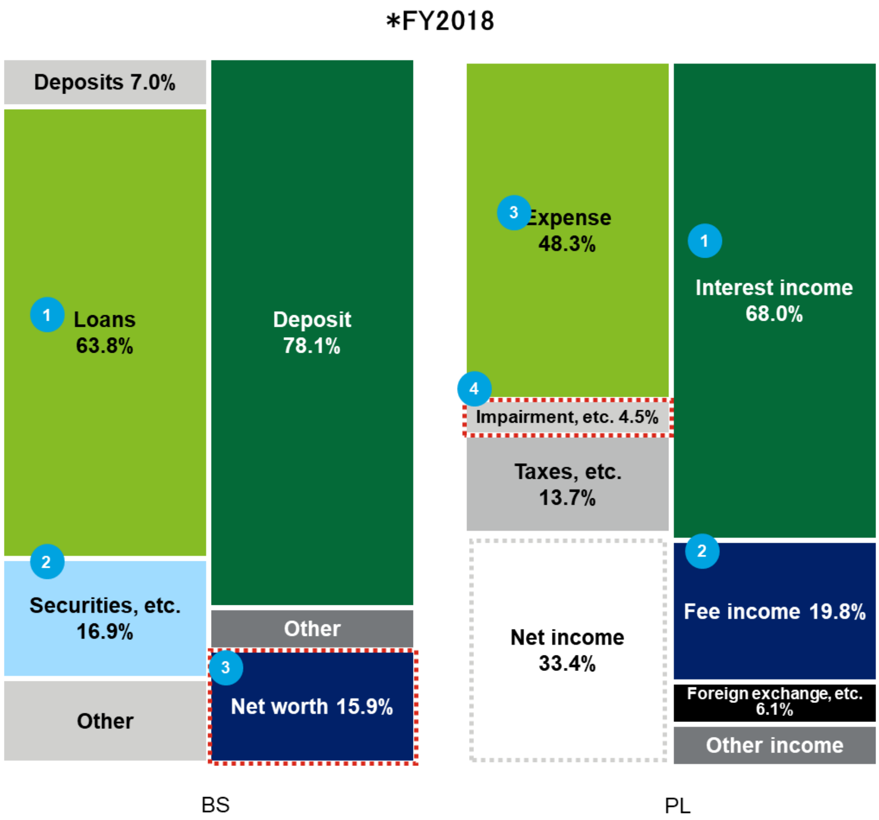
In terms of infrastructure for financial access, the number of banks established per 100,000 people in Kenya is 5.3 (2017), which is less than 8.6 in Ghana (2017). Looking at the number of ATMs installed per 100,000 people, it was 7.3 in 2009, but it has increased to 9.5 in 2017. [IMF, 2018]). In addition, while Kenya holds 55.7% of bank accounts, mobile payments account for an overwhelming share of the financial channel. This is due to the penetration of M-PESA, a remittance and settlement service between individuals using SNS provided by Kenyan telecommunications company Safaricom. As a means of personal identification, Kenyan citizens aged 18 and over are required to register ID cards.

(3) Financial service provider (Financial institutions)

To investigate the current state of financial institutions in Kenya, we surveyed one of the largest commercial bank in Kenya and East Africa ("the company"). THE COMPANY is Kenya's largest banking group and a financial institution operating in East Africa, including neighboring Kenya.

1) Capital structure and profit structure

The capital structure has a high equity ratio of 15.9% of net assets, and it is estimated that there is ample funding capacity. The balance between deposits (78.1%) and loans (63.8%) indicates that deposits are turning into loans (Figure 2.2.11). On the other hand, despite the high NPL (6.9%), impairment costs remains at 4.5% of the total, which means that impairment procedure has not progressed, and it is expected that there is a risk of impairment in the future.

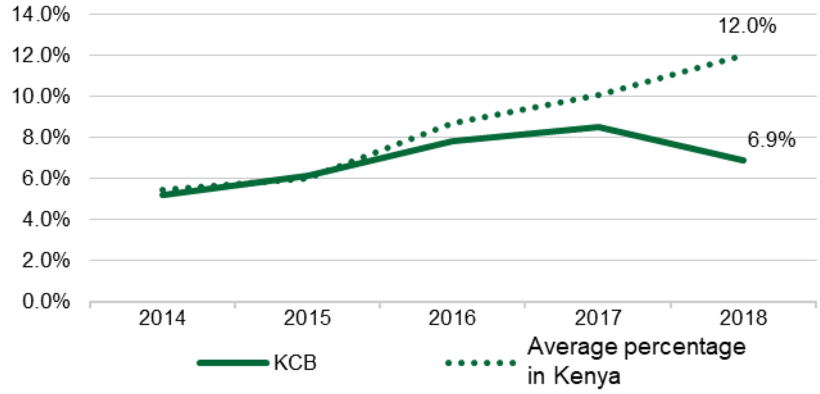


Reference） Annual Report

Figure 2.2.12 Overview of B/S and P/L of THE COMPANY（2018）

１） NPL

THE COMPANY's NPL has been at a high level of 6.9% (Figure 2.2.10), and Kenya's overall NPL in the banking industry is on a rising trend year by year, suggesting that lending risk is still high in the future.

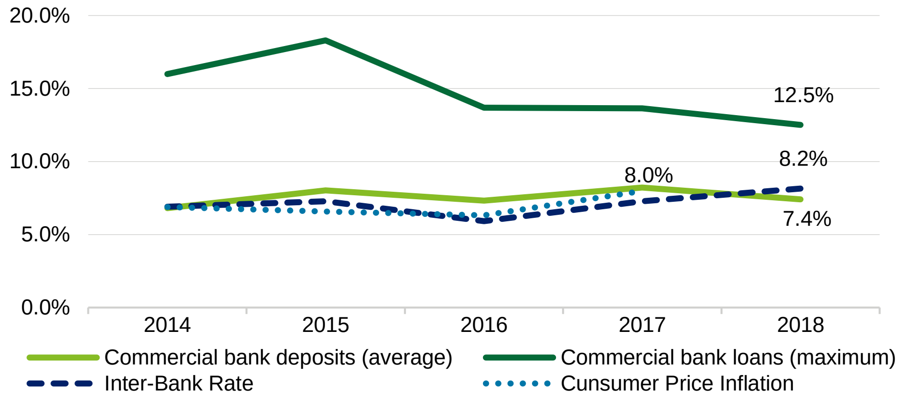


Reference） The company's annual report、IMF

Figure 2.2.13　NPL trend of THE COMPANY and overall NPL trend in Kenya

３） Interest rate

Inflation and deposit rates are almost at the same level in Kenya(Figure 2.2.13). Until the loan interest rate was abolished in November 2019, lending rates were held at the official discount rate + 4%, so the difference between lending rates and deposit rates was only 5.1% in 2018.



Reference） [ケニア統計局（KNBS）, 2016]、 [IMF, 2019]基に JICA research team

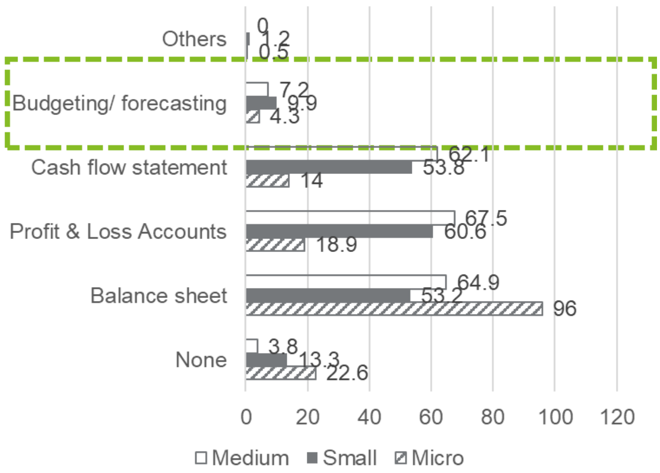
Figure 2.2.14　Interest rate transition at THE COMPANY and in Kenya

(4)　Current situation of financial service user (SMEs)

1)　Business accountability

In Kenya, the percentage of SMEs that have financial statements exceeds 50%, while less than

10% of SMEs and micro enterprises have financial plans of their business (Figure 2.2.16). A survey conducted by UNDP in 2015 on the status of preparation of a business plan, which is an item to be examined during the loan application, pointed out that many SMEs in Kenya do not have a business plan for internal management. ([UNDP, 2015]). In addition, companies that borrow from banks in the country account for 50.9% of the entire industry in the manufacturing industry and 30.8% of the entire industry in the service industry. The borrowers in the both industries are required to have collateral of which the amount is 2.5 bigger than their loan amount in average. ([World Bank, 2018]).



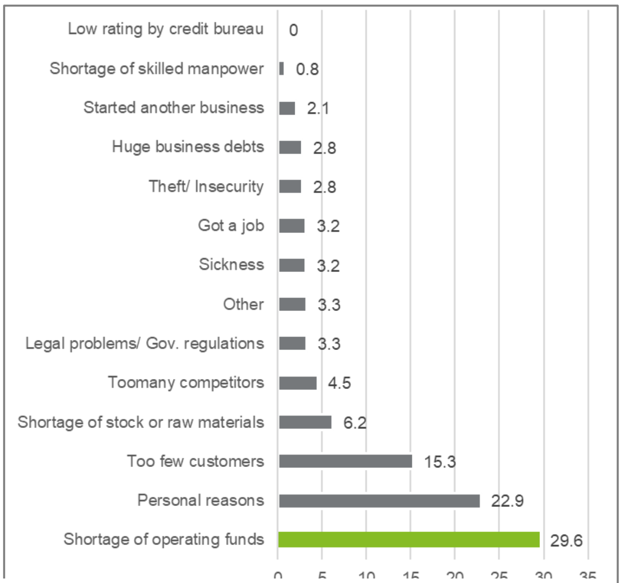
Micro-enterprises - less than 10 employees/ Small enterprises - 10 to 49 employees/ Medium sized enterprises -50 and 99 employees

Reference） [ケニア統計局（KNBS）, 2016]

Figure 2.2.15 Types of financial documents that SMEs generate（Kenya）

2） Finance

In Kenya, the percentage of SMEs using bank loans to raise working capital (36.2%) exceeds the global average (27.7%), but the lack of working capital is one of the most common reasons for SMEs going bankrupt. It is assumed that more working capital is required due to inefficient management planning and management (Figure 2.2.15). The ratio of Kenyan companies that raise capital through bank borrowing is 20.7%, far exceeding the Sub-Saharan region average (9.2%). On the other hand, Ghanaian companies that use their capital for capital investment account for 67.7%, which is below the global and Sub-Saharan region averages (71.9% and 74.4%, respectively). .



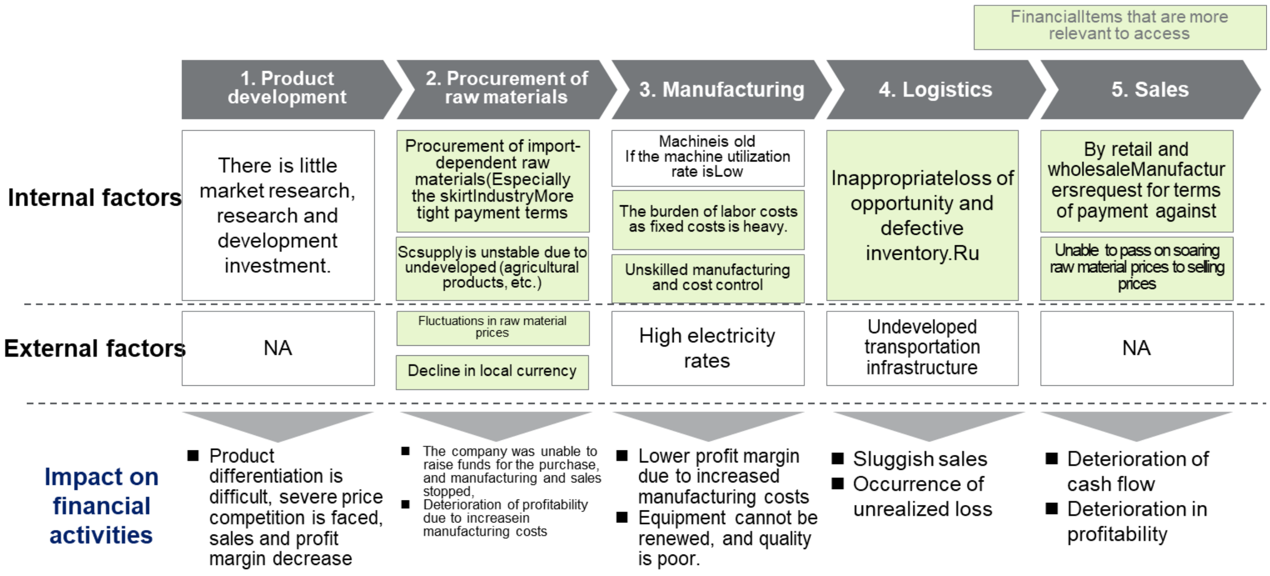
Reference） **[ケニア統計局（KNBS）, 2016]**

Figure 2.2.16 The reasons for bankruptcy of SMEs in Kenya

3) Value chain analysis

In the manufacturing industry in Kenya, challenges are likely to exist at each stage of the value chain. For example, according to the Ministry of Labor, Social Security and Services in Kenya, Kenya's labor productivity was 2.38 as of 2011, and although there has been a slight improvement in recent years, there is still room for improvement compared to other countries' labor productivity such as 7.6 of Japan and 5.3 of Malaysia ([Ministry of Labor, Social Security and Services, 2013]), and it is considered that inefficient management is increasing working capital. In addition, a survey of the Kenyan Industrial Development Master Plan in 2008 indicated that store payment terms were disadvantageous for SME manufacturers with less negotiation power. Payments from stores are often over 90 days after their delivery, and payments are often made after goods have been sold.

This payment situation has created a cash flow problem for SME manufacturers, and is believed to be promoting an environment where manufactures switch to direct sales which is more unstable than using retail channels ([JICA, 2008]).). In addition to the above situation, due to the deterioration of the macroeconomic environment from the late 1990s to the mid-2000s, the machines were not operating at its full capacity because of the less demand than originally forecasted and manufacturing facilities are aging because of lack of proper maintenance. In light of the above, Kenya seems to have strong needs for working capital and capital investment and renewal for further growth of SMEs (Figure 2.2.18).

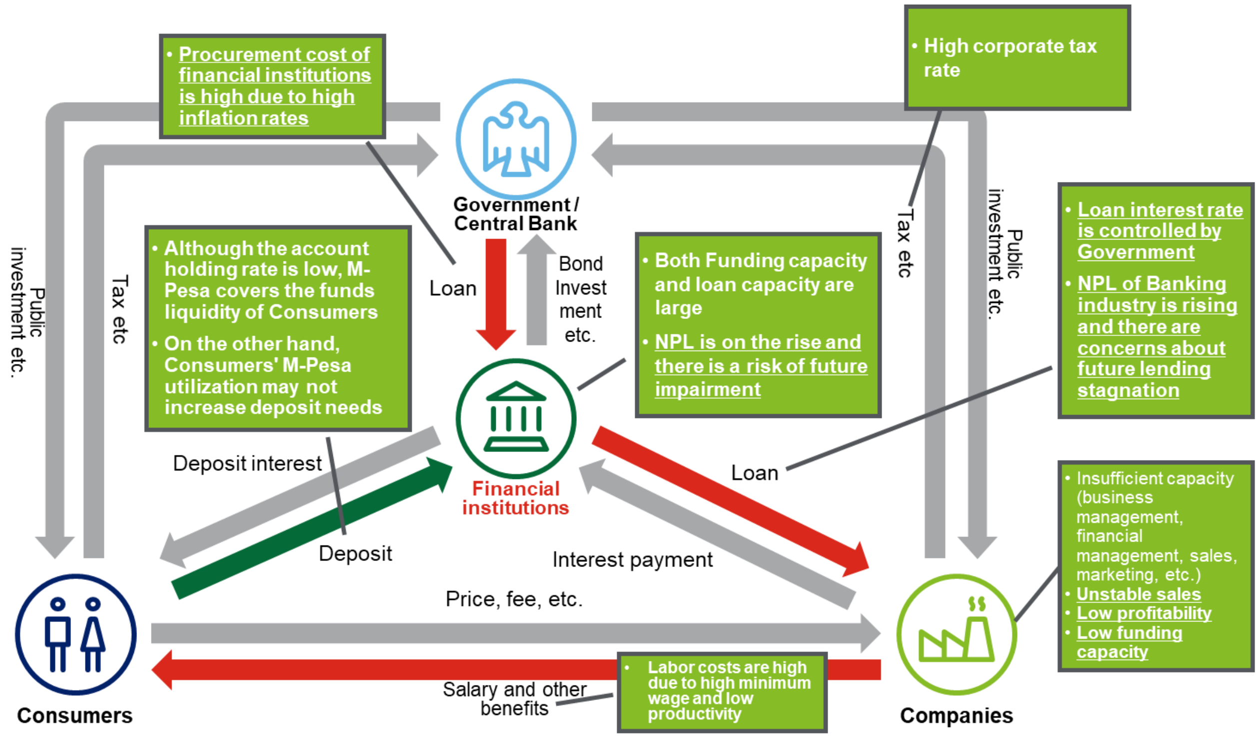


Reference) [国際協力機構（JICA）, 2017]

Figure 2.2.17 Value chain analysis of manufacturing industry （Kenya）

(5) Bottle-neck analysis (hypothesis)

Kenya's NPL is rising year by year, and despite concerns about future credit crunch, the removal of the lending ceiling will make the banks be able to set an appropriate interest rate and encouraged to increase lending transaction. In addition, M-PESA complements the liquidity of individuals.

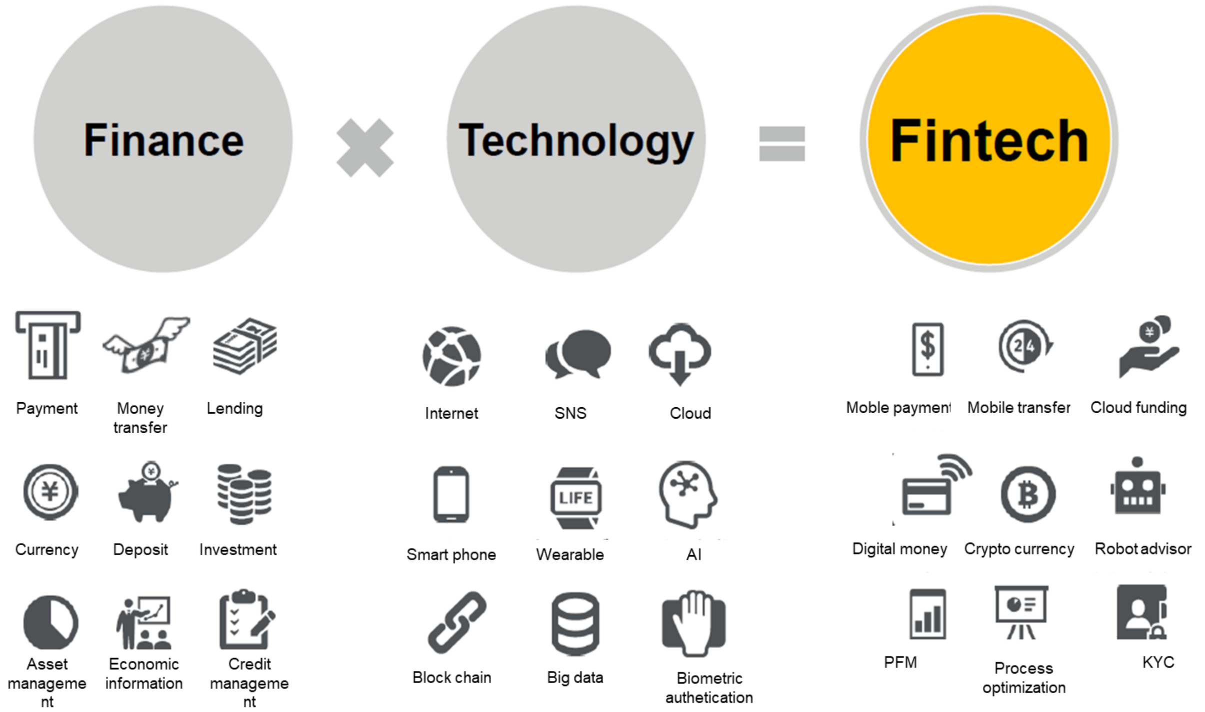


Reference） JICA research team

Figure 2.2.18 Financial Access Bottleneck Hypothesis (Kenya)

2.3 Analysis on alternatives ways of corporate finance including Fintech

In recent years, FinTech has attracted attention not only in the financial sector but also in the non-financial sector. FinTech is a new financial service created by multiplying Finance and Technology, and various financial services are developed and implemented worldwide.



Reference） Deloitte Tohmatsu Venture Support

Figure 2.3.1 Combination of services and technology in fintech

According to World Economic Forum (WEF), financial services offered within Fintech market are classified into 7 categories.

	Type of service	Trend	Typical players
1	Settlement (Payment)	• Cashless, online consumption behavior, and advances in mobileization • Decrease in profit margin due to intense competition (possibility of occultation) • Regional differences in consumer behavior (cash, credit card bias) and regulatory responses are noticeable	Amazon Apple Pay Bitcoin
2	Insurance (Insurance)	• Diversification of insurance due to the diversification of customer needs (on-demand,Usage-based) • Modularization of insurance has increased the number of new players entering the market, threatening existing players	Tesla Ladder & Haven BIMA
3	Digital Banking (Digital Banking)	• Accelerated banking platforms can create disruptive innovation in traditional banking businesses • Fintech companies and giant technology companies likely to lead the standardization of their banking business on behalf of banks	Cr'dit Agricole Intuit Santander
4	Loan (Lending)	• New financial intermediation may improve financial access to the subprime layer • Non-financial platformers are emerging as players with new data ownership and credit functions rise • With the advent of fintech companies and platformers that can provide lending in a faster and simpler process, existing financial institutions are under pressure to take immediate action.	Amazon Quicken Loans Tradeshift
5	Asset management (Investment Investment)	• Individuals are more responsible for their investments, and asset management using robotics may be the mainstream • Increase in low-cost operational products accelerates integration and collaboration for scale benefits	Charles Schwab Kensho Future Advisor
6	Market infrastructure (Market Infrastructure)	• Digitalization of traditional over-the-counter products could make it more popular • Collaboration and partnership with traditional players leads new players to innovation	TRUMID ALGOMI
7	Stock-type crowdfunding (Equity Crowdfunding)	• Crowdfunding platform operators are growing rapidly due to the needs of entrepreneurs and investors • Regulation is an important factor in determining the success or failure of crowdfunding.	SEEDRS AngelList

Reference) **[World Economic Forum, 2017]**

Figure 2.3.2 Seven Financial Services and Trends in FinTech Market by WEF

2.3.1 Trends in lending services

As this survey focuses especially on improvement of access to finance by leveraging existing lending services, it examined the Fintech trend specifically in lending services. Following sections shows the samples of emerging players both in consumer market and business market. The figure below summarizes the methods of financing: (1) indirect financing and (2) direct financing, and summarizes the traditional methods of financial services and those that have recently emerged.

Types of funding methods

			Methods that have appeared in recent years	
	Funder	Traditional methods	What's in service?	It is mainly usedRuTechnology
Indirect finance	Lender	• Business Loans • Factoring (Transfer of Accounts Receivable)	【For individuals】 • **Score-lending** • **Online secured loans** 【For corporations】 • **Big DataCreditworthiness utilizing analyticsEvaluation** • **Transaction lending** • **Low liquidityAsset trading platform** 【For individuals and corporations】 • Microfinance (Multi-person Mutual Solidarity Guarantee)	• Big Data • Ai • Machine learning • Cloud • Blockchain • Smartphone • Internet • SnS
	Bank	• Factoring (Transfer of Accounts Receivable) • Bill discount • Institutional Loans (Founder Loans and Guaranteed Loans) ※Collaboration with the national government and local governments • Real estate-backed loans • Liquidity-backed loans (Abl) • Unsecured loans • Liquidity of assets (receivables, real estate) • Project Finance • Syndicated Loan		
	Non-financial institutions	• N/a		
Direct finance	Personal (Relatives and friends))	• (unsecured) loans • Investment	【For corporations】 • Security Token Offering (Sto)* • NewCryptocurrency publishing (Ico)** 【For individuals and corporations】 • **P2PLending** • Crowdfunding - Donation type - Investment type - Purchase type	
	National and local governments	• Subsidies and Grants		
	Investor (Angel,Vc)	• Investment • StockRight to reserve		
	Investor (Individuals and Corporations)	• Bonds (private placement bonds, public offering bonds, bonds with share options)		

*STO (Security) Token Offering): Issue your own currency (securities) called security tokens to raise funds
**Ico(Initial Coin Offering: Issue virtual currency and raise funds

Reference) JICA research team

Figure 2.3.3 Types of fundraising (Both traditional and alternative)

Furthermore, in this section, we will focus on services that are new financial methods, 1) for individuals and 2) for corporations, and conduct deep-cutting through case studies. The names of the companies that conducted the case studies and the main technologies used by each service are as follows.

Target	Method	Name of the company	Big Data	Artificial Intelligence	Machine Learning	Cloud	Blockchain	Smartphone	Internet	SNS
Indivisual	Score-lending	Zhima credit	●	●	●	●		●	●	●
	P2PLending	SBI Social Lending Co., Ltd.							●	
	Online secured loans	Borro Limited							●	
Corporation	Credit rating using big data analysis	LENDINGKART Technologies Private Limited.	●	●	●			●	●	
	Transaction lending	Amazon.com	●	●	●			●	●	
	Low-liquidity asset trading platform	The Receivables Exchange LLC							●	

Reference） JICA research team

Figure 2.3.4 Technology implemented in each services (for reference)

(1) Consumer lending

1) Categorization of key players

According to a survey conducted by the Ministry of Economy, Trade and Industry of Japan in 2016, lending related services using Fintech can be classified into three categories: lending services, lending brokerage platforms, and secured loans. By utilizing technologies such as big data and Artificial Intelligence on credit assessment and optimization of operation, the new layer of consumers are uncovers in the consumer lending market, and new types of services such as lending brokerage platform are emerging rapidly.（ [経済産業省 経済産業政策局, 2016]）

2) Case study

a) Lending service - Lending service based on individual credit scoring system utilizing big data

Name	Zhima credit
Year of foundation	2015
Location	China

Sesame (Sesame) Credit is an independent credit services organization under the Alibaba Group's Ant Financial Services, one of eight companies that the People's Bank of China approved in January 2015 to launch its personal credit score service. The company evaluates the creditworthiness of individuals (users) using cloud computing, machine learning, and advanced technologies such as AI. The company uses users' credit information obtained through the scoring service to provide credit check services for credit cards, consumer finance, loans and leases, secured loans, travel, and public works etc. Through its service, users who have not been able to demonstrate their creditworthiness can now present their creditworthiness to companies that offers various services （ [Ministry of Internal Affairs and Communications of Japan, 2019]）。

Based on transaction history from Alibaba Group's e-commerce, settlement history and other data, the company quantify the users' creditworthiness based on the overall scores of 5 items rated on a five-point scale; (1) identity traits, (2) fulfillment abilities, (3) credit history, (4) personal connections, and (5) behavioral preferences. (Figure 2.3.3).

Currently the database the company use as the basis for the credit score does not include personal data or transaction history generated outside the Alibaba Group.（ [木内　登英, 2019]）。

Figure 2.3.5　Sesami credit scoring image and score classification

b) Lending brokerage platform - Social lending

Name	SBI Social Lending Co., Ltd.	
Year of foundation	2008	
Location	Japan	

Loans for business funds to businesses are provided in the form of a cloud fund. Individual investors select funds for borrowers via the crowdfunding platform and invest the desired amount. The investment amount can be invested from 10,000 yen per unit, and a preset loan interest is received as return (average yield is 30,000 to 100,000 yen). To date, 42,181 investors (as of November 2019) have registered and raised a total of 35.7 billion yen.

Reference） **[SBI Social Lending, 2019]**

Figure 2.3.6　How SBI social lending works

c) Secured lending - Online "Pawn shop"

Name	Borro Limited	

Year of foundation	2008	borro PRIVATE FINANCE
Location	U.K.(Oxford)	

Online pawn shop offering consumer lending secured by their borrower's luxury goods such as art, jewels, and watches. Unlike conventional consumer lending services, users are able to receive loans without leaving the credit record as there is no credit assessment process. Lending process start with customers sending their security/ luxury goods, then the company assess the value of the goods, and lastly, the fund is disbursed once the loan condition is determined. The loan amount is 50-70% of the assessed amount. The loan interest rate is 3-4%. The maximum loan period is 6 months. It is also possible to borrow money while consigning sales of products, and the loan interest rate is 1-2%. After deducting the sales commission by 10%, the loan balance is offset. In Japan, Bank Co Ltd. launched a similar service called "CASH" in 2017, and currently offers personalized assessment and cashing services, mainly for high-end fashion brands.

(2) Corporate lending

1) Categorization of key players

According to a survey conducted by the Ministry of Economy, Trade and Industry in 2016, financing services using Fintech for corporations are classified into three categories: (1) financing services, (2) financing intermediary platforms, and (3) illiquid asset trading platforms. Utilizing technologies such as big data and AI for credit judgment and business efficiency, corporate financing services (secured and unsecured) will be provided to a new customer base, and some new markets such as lending platforms and illiquid asset trading platforms have also been created. ([Ministry of Economy, Trade and Industry Economic and Industrial Policy Bureau, 2016])

2) Case study

a) Lending service (Example of creditworthiness evaluation and unsecured lending using big data analysis)

b) Name	LENDINGKART Technologies Private Limited.	LENDINGKA₹T Think Cash, Think Lendingkart Group!
Year of foundation	2012	
Location	India	

Lendingkart, founded in India in 2012, uses AI and other technologies to analyze big data to develop more efficient and effective ways to assess the creditworthiness of debtors and provide related services are doing. Details of the technology, algorithms, etc. are also not disclosed. However, the company provides entrepreneurs and small and medium-sized enterprises in India an evaluation of company's credit risk profile based on more than 2200 data items, including income tax returns and loan repayment history, set short-term credit facilities, and make loans for their customers' working capital. The company is also considering offering its credit risk analysis software to existing financial institutions (including non-banks). Currently, the company is receiving loans from banks and provides services in the form of revolving funds, monetizing with interest income while utilizing its own funds [KPMG, H2 VENTURES, 2019].

c) Loan service (credit evaluation using big data analysis and unsecured loan)

Name	Amazon.com
Year of foundation	1994
Location	U.S. (Washington)

"Transaction lending" is one of the alternatives to conventional bank loans utilizing big data. Transaction lending differs from traditional lending, which focuses on repayment capacity based on business and financial and annual income information, and on asset and collateral evaluation. This is a framework that collects various data such as transaction history such as evaluations, and determines creditworthiness and loan conditions based on an examination model developed by the service provider. Traditionally, loan decisions have been made based on corporate business plans centered on financial statements, but transaction lending uses credit scoring models that utilize big data to determine creditworthiness and determine loan conditions which make the loan assessment period shorter. E-commerce Amazon in the United States also offers transaction lending, and launched in Japan in 2014.

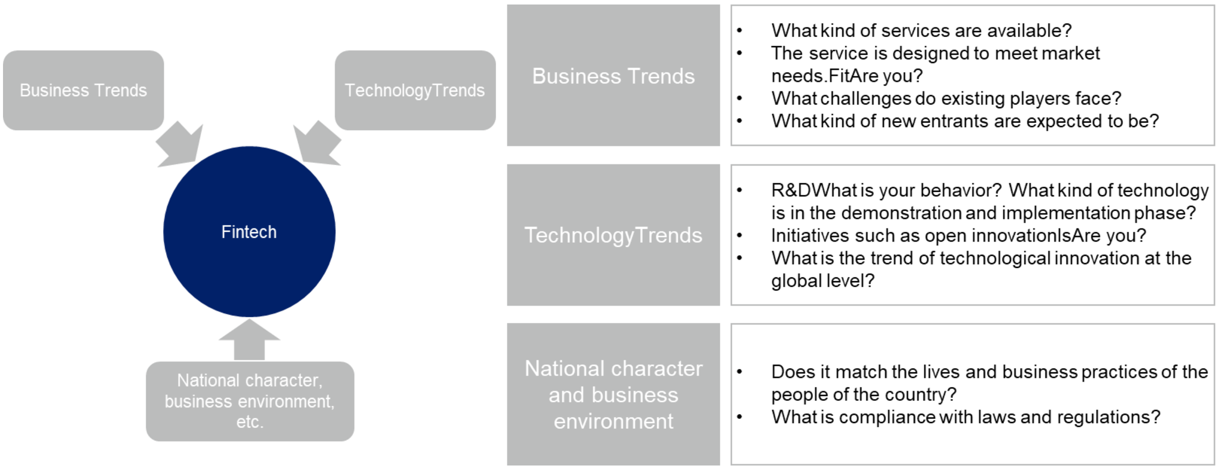
d) Low liquidity asset trading platform (example of a platform that can trade accounts receivable)

Name	The Receivables Exchange LLC
Year of foundation	2007
Location	U.S. (New York)

Receivables Exchange develops and operates an auction-type platform that primarily connects sellers of accounts receivable and preferred stock with buyers such as financial institutions. Exchange transactions are standardized and structured so that accounts receivable can actually be sold safely. Through this platform, the company reduces the burden on the balance sheet for sellers, while providing risk-adjusted returns to buyers. The market for accounts receivable on this platform is US $ 17 trillion and has been accumulating approximately US $5 billion since its inception ([STARVEST PARTNERS, 2019]).

2.3.2 Fintech trends in Africa

In order to grasp the trends of FinTech in a certain country / region, it is necessary to examine it from three viewpoints: business trends, technological trends, national characteristics and business environment. (Figure 2.3.3)



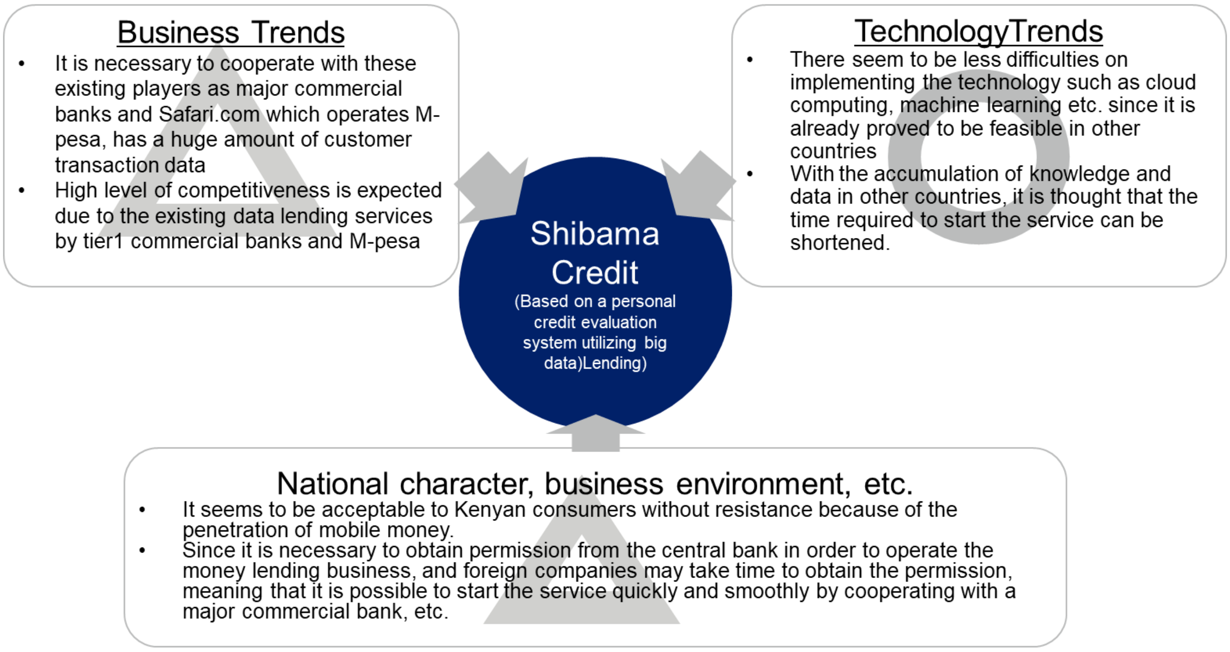
Reference） JICA research team

Figure 2.3.7　Three points of view to assess the trend of fintech service

In particular, in the case of fintech, in addition to conventional financial companies, it is possible for various players such as internet service providers (SNS, EC sites, etc.), startups, IT vendors, telecommunications and mobile phone companies, universities, research institutes and others to provide new services. Therefore, the market situations of fintech is continuously changing. Also, technology is constantly evolving, and research and development (R&D) is being promoted in various countries and regions against the background of recent startups and the Fintech boom, so it is hard to keep up with the technology trends. Furthermore, even financial services backed by excellent business models and technologies cannot provide added value to users unless they fit the nationality and business environment of the country/ region concerned. Therefore, advanced and diverse expertise is required in order to understand the fintech trend.

Next, the below section shows the result of analysis on simulation cases of implementation of score lending service by Sesami credit mentioned in 2.3.1. in Kenya and Ghana. (Because a detailed study of the legal framework of the target country has not been conducted in this survey, it is important to note that a detailed study is necessary when actually developing a similar business in those countries.)

[Simulation case 1] Kenya introduces Sesami’s score lending service



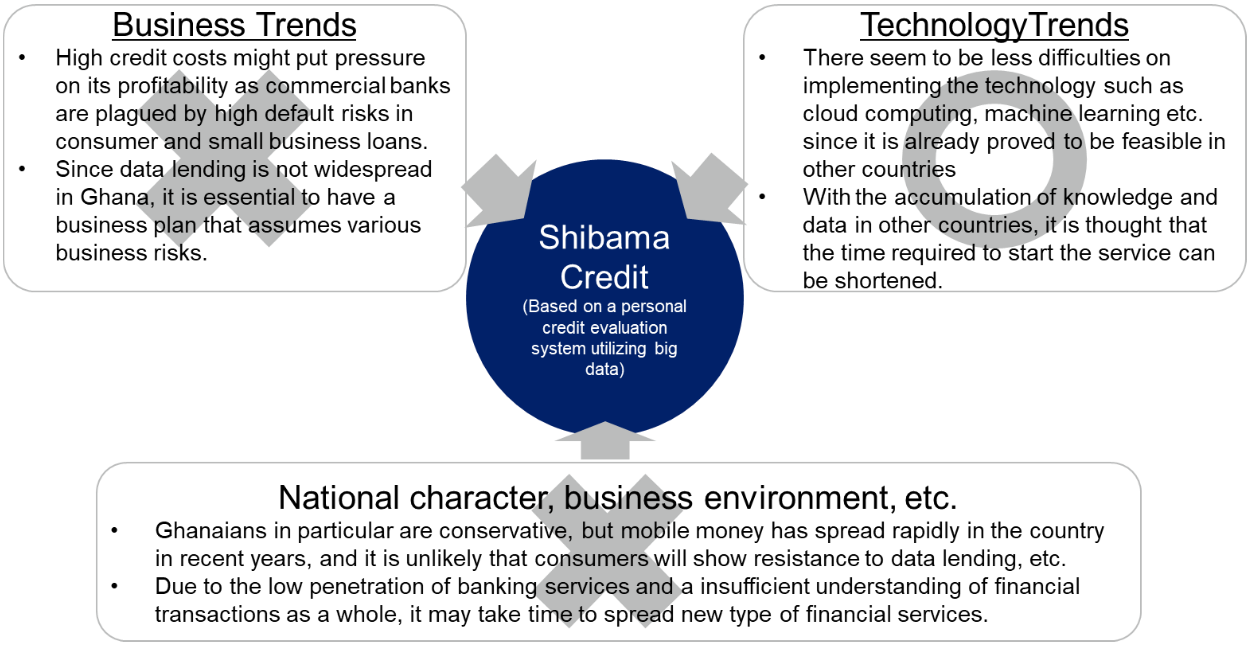
Reference） JICA research team

Figure 2.3.8 Result of the simulation case 1 "introducing Sesami's score lending service in Kenya"

The verification results of [Simulation case 1] are as follows.

- "Business trends" indicates that the business providers can enter the market, but intense competition is expected, so it is necessary to carefully consider business strategies. For example, it seems that cooperation with a major commercial bank with a strong business foundation is effective.
- "Technological trends" are considered to be less problematic, as it is unlikely that major technical issues will occur when entering.
- Regarding "nationality, business environment", it is necessary to cooperate with existing players such as major commercial banks in order to quickly obtain a business license from the regulatory authorities and start business.

[Simulation case 2] Ghana introduces Sesami's score lending service



Reference) JICA research team

Figure 2.3.9 **Result of the simulation case 2 "introducing Sesami's score lending service in Ghana"**

The verification result of [Simulation case 2] is as follows.

- "Business trends": It is likely to increase credit costs due to default risk, and is not necessarily favorable given other business risks.
- "Technological trends" : It is unlikely to cause major technical issues when entering.
- In terms of "Nationality, business environment, etc.," it is highly probable that lending services will be accepted by users due to the rapid spread of mobile money in recent years. However, NPL ratio is expected to be high due to borrowers' lack of understanding of lending services.

[Simulation case 3] Introducing LENDINGKART's lending service in Africa

Next, the below section shows the result of analysis on simulation cases of implementation of lending service by LENDINGKART mentioned in 2.3.1 in the African region. (Because a detailed study of the legal framework of the target country has not been conducted in this survey, it is important to note that a detailed study is necessary when actually developing a similar business in those countries.)

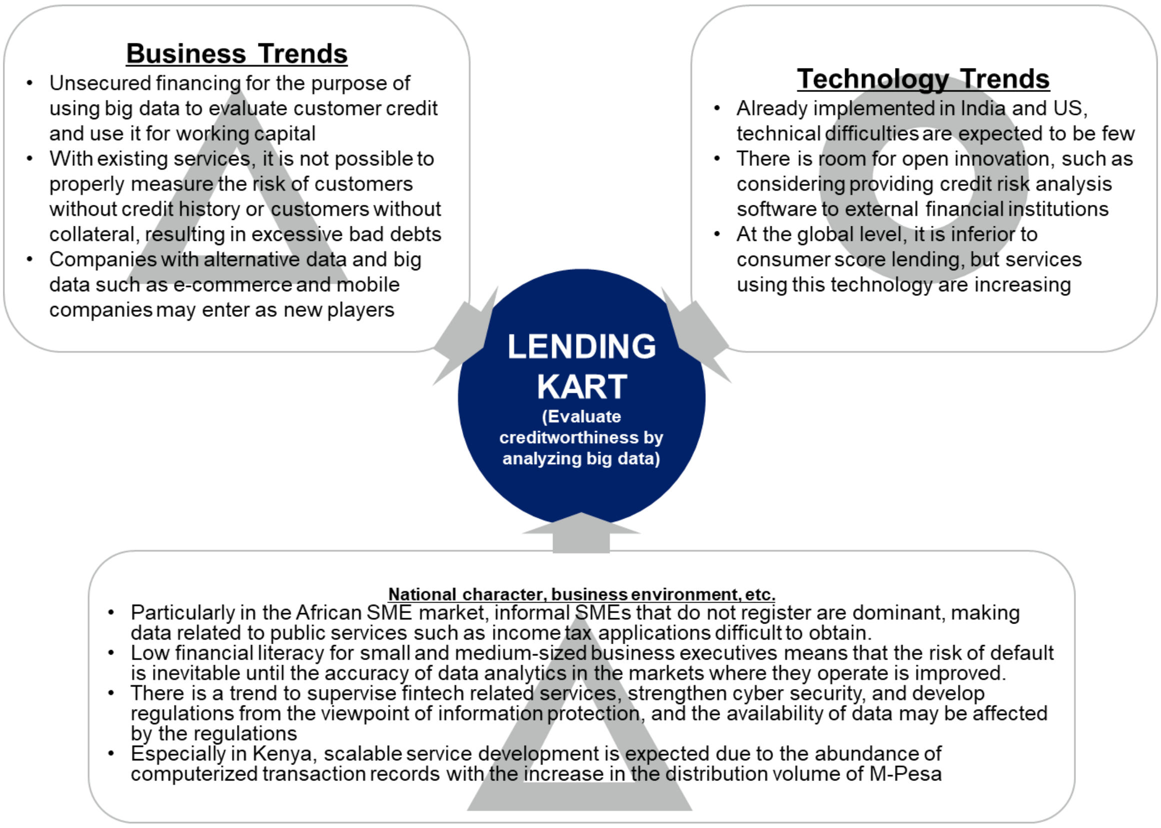


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Figure2.3.1 **Result of the simulation case 3 "LENDINGKART's lending service in Africa"**

The verification results for [Case 3] are as follows.

- "Business trends" – It seems that the services corresponds to the market needs in a way in which it refines the accuracy of credit assessment of SMEs by utilizing big data which the traditional financial service providers were struggling with. However, local companies with their asset of big data might enter the market as a new player and make the market more competitive.
- "Technology Trends" – It is considered to be good, as it is unlikely that major technical issues will occur when entering.
- "Nationality, business environment, etc." - It is assumed that there are many regions where mobile money is widespread in Africa and that there is already abundant digitized transaction data. On the other hand, given the large number of informal sectors in SMEs and the recognition of the importance of developing fintech-related laws and regulations among the local government agencies, the availability of alternative data necessary for credit risk analysis in this market needs to be carefully examined.

2.3.3 Overview of Bali Fintech Agenda

The Bali Fintech Agenda, adopted by the IMF and the World Bank in October 2018, focuses on "financial inclusion supported by Fintech" and "Fintech-related financial regulations". For the purpose, the following 12 policies for the introduction of FinTech have been established. Among them, regarding the promotion of fintech in the African region, "III Reinforce Competition and Commitment to Open, Free, and Contestable

Markets", "Foster Fintech to Promote Financial Inclusion and Develop Financial Markets", "VII Safeguard the Integrity of Financial Systems" and "X Develop Robust Financial and Data Infrastructure to Sustain Fintech Benefits " are particularly important.

	Agenda	Key Description
I	Embrace the Promise of Fintech	Embrace the Promise of Fintech with its far-reaching social and economic impact, particularly in low-income countries, small states, and for the underserved, and prepare to capture its possible wide-ranging benefits.
II	Enable New Technologies to Enhance Financial Service Provision	Enable New Technologies to Enhance Financial Service Provision by facilitating foundational infrastructures, fostering their open and affordable access, and ensuring a conducive policy environment.
III	Reinforce Competition and Commitment to Open, Free, and Contestable Markets	Policymakers should address the risks of market concentration, and should foster standardization, interoperability, and fair-and-transparent access to key infrastructures.
IV	Foster Fintech to Promote Financial Inclusion and Develop Financial Markets	Fintech issues should be part of a national inclusion and financial and digital literacy strategies, while fostering knowledge-sharing between public- and private-sector players, civil society, and other stakeholders.
V	Monitor Developments Closely to Deepen Understanding of Evolving Financial Systems	Achieving these objectives brings out the importance of continuous monitoring to identify emerging opportunities and risks, and to facilitate the timely formation of policy responses.
VI	Adapt Regulatory Framework and Supervisory Practices for Orderly Development and Stability of the Financial System	Holistic policy responses may be needed at the national level, building on guidance provided by standard-setting bodies.
VII	Safeguard the Integrity of Financial Systems	It is important to strengthen AML/CFT compliance and monitoring, including by using technology (Regtech and Suptech solutions) to support regulatory compliance and supervision.
VIII	Modernize Legal Frameworks to Provide an Enabling Legal Landscape	An enabling legal framework can be fashioned by having clear and predictable legal rules that accommodate technological change, tailored to national circumstances.
IX	Ensure the Stability of Domestic Monetary and Financial Systems	Ensure the Stability of Domestic Monetary and Financial Systems by considering the implications of fintech innovations to central banking services and market structure.
X	Develop Robust Financial and Data Infrastructure to Sustain Fintech Benefits	Developing such robust infrastructure raises a broad spectrum of issues that are relevant not only to the financial sector but also to the digital economy at large, including data ownership, protection, and privacy, cybersecurity, operational and concentration risks, and consumer protection.
XI	Encourage International Cooperation and Information-Sharing across the global regulatory community	Encourage International Cooperation and Information-Sharing across the global regulatory community to share knowledge, experience, and best practices to support an effective regulatory framework.
XII	Enhance Collective Surveillance of the International Monetary and Financial System and the adaptation and development of policies	Enhance Collective Surveillance of the International Monetary and Financial System and the adaptation and development of policies to support inclusive global growth, poverty alleviation, and international financial stability in an environment of rapid change.

Reference） JICA research team

Figure 2.3.10　Bali Fintech Agenda

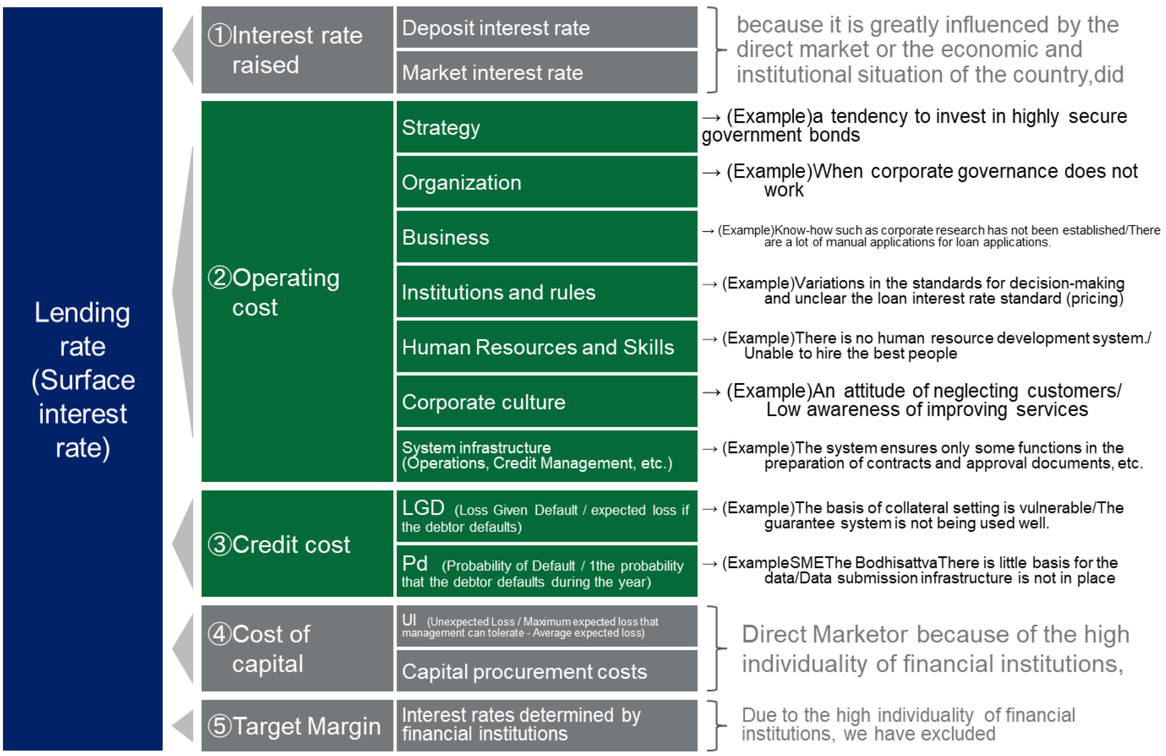
In Kenya and Ghana, the target countries of this survey, mobile money and mobile banking are rapidly spreading, despite the lower penetration rate of banking services compared to developed countries, and it is being recognized as an important means of financial inclusion.

On the other hand, the spread of fintech creates new risks and problems for users and financial institutions. For example, the spread of lending services that utilize customer transaction data and behavior history will increase the risk of personal privacy infringement regarding the handling of that information. In Europe, the General Data Protection Regulation (April 2016) so-called "GDPR" has been enacted, and the protection of all personal data in the EU has been strengthened.

It is also important to strengthen data security by utilizing vast amounts of data. The Bali Fintech Agenda emphasizes the importance of countries actively and cooperatively addressing these issues. Kenya and Ghana will also need to review their existing data security and privacy protection-related legal frameworks to further promote fintech in the future. However, the Bali Fintech Agenda shows the impact of the introduction and diffusion of fintech and the direction of its general countermeasures. It is necessary to carefully evaluate the social and economic impacts of each country and region while referring to the Bali Fintech Agenda.

2.4　Approaches to Improve Financial Access (Long List)

In this survey, based on the fact that high interest rates have inhibited the demand for loans by companies, we hypothesized that the biggest bottleneck that would hinder the circulation of funds would be lending rates. Based on this hypothesis, the long list of measures to improve financial access includes five major categories of components of interest rates: (1) procurement interest rate, (2) operation cost, (3) credit cost, (4) capital cost, and (5) target margin. After further subdividing the main categories, for each item, the issues for players (financial institutions), users (SMEs), and infrastructure (government, etc.) and the direction of problem solving are summarized (The basic structure of the long list is shown in Figure 2.4.1). In the survey of the project (draft) to be described later, we will pay particular attention to the reduction of operation costs and credit costs (the long list itself is attached in the appendix).



Reference） JICA research team

Figure 2.4.1 Factorization of loan interest rate

As an example of items described in this long list, an example of (1) operation cost will be described as follows. In this list, the components of operation cost are divided into seven elements: strategy, organization, operations (financing-related), systems / rules (financing-related), human resources / skills (financing-related), corporate culture, and system infrastructure. The tasks were divided into five stages: sales / survey, reception, screening, contract / payment, and collection, and the issues for each item and the direction of resolution were mapped out. For example, among the operational costs, the challenge in terms of human resources and skills related to sales and research in financial institutions is identified as "Insufficient industry research skills, lack of sales force for customers", and the direction of resolution is “Support on capacity development of staffs on industrial research skill and client consultation skills”

For example, for (3) credit cost, of which i) Loss Given Default and ii) Probability of Default are the main components, and they are breakdown into two elements; i) receivables amount and irrecoverable amount; ii) credit information and scoring model respectively. This is to identify the issues and directions of solution for each actor. To be more specific, for example, among the default rates which constitute credit costs, items related to the debtor's business plan, which is one of the factors related to credit information, have the issues and directions of solutions at financial institutions, SMEs, and infrastructure as follows.

Actor	Challenges	Direction to resolutions
Financial Institution	Unable to collect reliable business plan	Support for improving business planning support skills/ Support on creating an environment to support the realization of business plans
SME	Lack of skills to develop business plans over the medium to long term	・ Consultation for business analysis and business planning ・ Consultation on business operations
Infrastructure (Government/ third institutions)	We have not been able to create an environment in which SME can operate stably due to high inflation rates etc..	Implementation of measures that enable SME to operate stably (control of inflation rate, approach to foreign exchange stability, public investment control, sector individual support, etc.)

Table 2.4.1 A sample item in the long list

Chapter 3 Result of the field survey

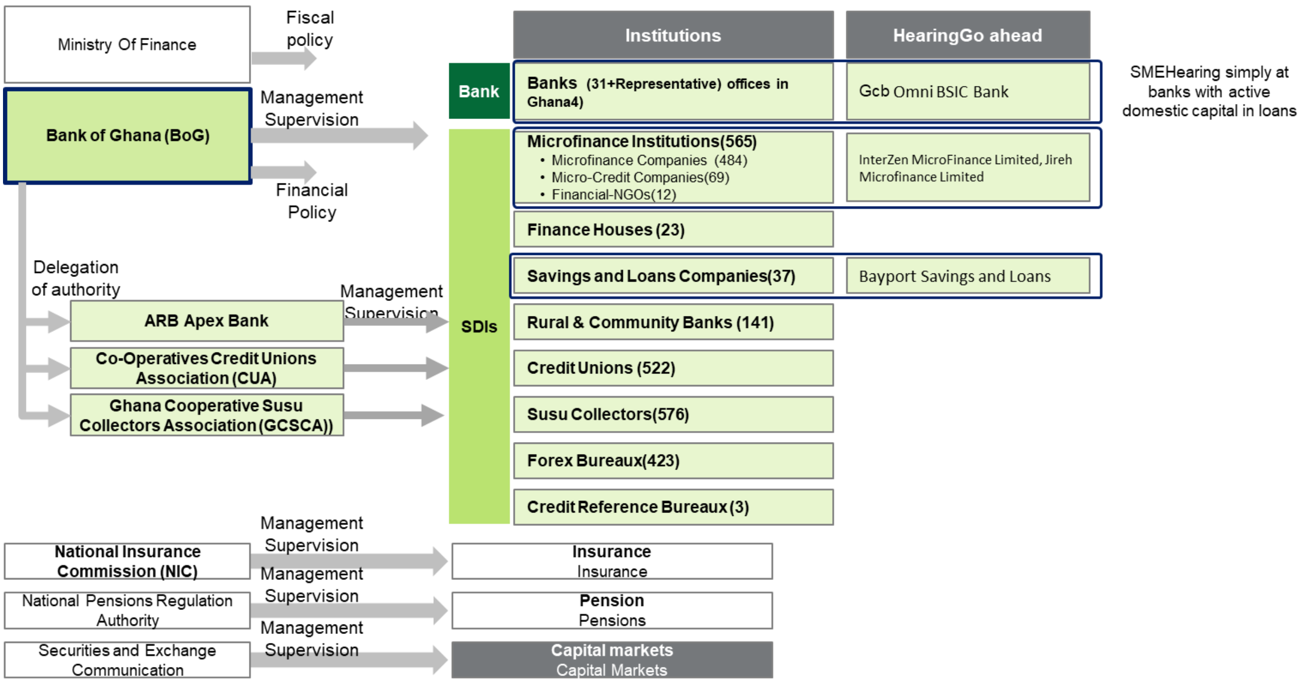
3.1 Ghana

3.1.1 Summary

High lending rates are a bottleneck in financial access for micro and small businesses in Ghana. For small and medium-sized enterprises that do not have sufficient profitability, high interest rates are often set to hesitate to borrow from financial institutions, but as mentioned above, it is considered that the main factor driving interest rates is the high credit costs (impairment costs) and operation costs. It is also important to note that credit costs are caused by “lack of collateral” and “high default rate” of the borrower.

In addition, following the recent increase in the minimum capital ratio by the Central Bank of Ghana (BOG), it was found that the industry has been reorganized in recent years to stabilize the management of the banking sector, which made financial institutions be more cautious about taking risks than they were before. Under such circumstances, it is difficult to improve the current situation in the short term, and it is necessary to take a multitude of improvement measures from a long-term perspective.

As the below figure shows, financial institutions are classified into three groups in Ghana; i) The central bank, ii) Private financial institutions including specialized deposit-taking institutions and commercial banks, and iii) Governmental financial institutions. In this survey, interviews were conducted with private financial institutions (Commercial Banks, MFIs, S&Ls, etc.) and public financial institutions to reveal the direction of improvement of SME's financial access.



Reference） [世界銀行, 2018]

Figure 3.1.1 Legal framework of financial institutions and services（Ghana）

3.1.2 Interview results

(1) Legal systems, policies, and infrastructure

During the field survey, it was confirmed that the soft infrastructure that supports loan transactions, such as the family register system, resident register, personal credit information system, and the real estate registration system, is still undeveloped, which affects financial access for SMEs indirectly.

On the other hand, the Bank of Ghana have declared the time after September 2019 as “Era of Deposit Protection", and been initiating amendment and revision of laws and regulations and introduction of some new rules with the support of the World Bank, IMF and the German government to adapt an international regulatory accord of Basel III. Importantly minimum capital requirements at financial institutions was raised as part of this measure (see 2.2.1 (1) above), and it is expected that the supervision over credit management of financial institutions is going to be further strengthened in response to the legislation aiming to reinforce the financial sector in Ghana.

Act	Year of enforcement	Overview
Central bank act (612)	2002	Governs the activity at central bank
Foreign exchange act (723)	2006	・ Foreign currency handling of SDI is prohibited by the law ・ Set the upper limit (10,000USD) of foreign currency that can be handled in one transaction
Credit report act (726)	2007	・ Financial stability department is in charge of the law ・ Require banks to provide data to credit institutions for the purpose of lowering the cost of credit
Borrowers and lenders act (773)	2008	・ Collateral registration "Collateral registry" ・ Current legislation is currently being revised due to lack of completeness, such as double pledges of collateral.
Anti-money laundering act	2008	The following measures have been taken based on the law. ・ Issuing guidelines on anti-money laundering and obligating banks to have an anti-money laundering division ・ The form for opening an account has been unified ・ Financial intelligence center was set up to monitor money flow
931 Deposit protection act	2016	・ Revised version will take effect in September ・ "Safety net of retail deposit" ・ German government cooperates to establish deposit insurance fund ・ The bank will pay Premiums (0.1% * of the minimum paid-up capital) and plan to introduce a system for deposit insurance funds

Banking and Specializing deposit-taking institutions act	2017	・ Covers 90% of Basel II. ・ Guidelines related to minimum capital, credit risk, market risk, and operational risk have been prepared and introduced based on this law.
Payment systems and services act	2019	・ Law for managing electronic money ・ Promote Financial inclusion strategy utilizing mobile penetration rate in Ghana ・ E-Wallet is recognized as a bank system by the enforcement of the relevant law ・ A business license is granted to a business handling mobile money.

Table 3.1.1 Major laws and regulations related to financial institutions that have been revised or are under review（Ghana）

(2) Financial service provider (Financial institutions)

During the field survey, it was found that there are issues related to financial access on the financial institution's side as follows: (1) Insufficient screening capacity of financial institutions (lack of information and data), (2) Inefficient lending operations, and (3) Lack of consultation skills of loan officers. In addition, the survey revealed that banks are less receptive to lending to SMEs because they bear the credit costs associated with SME financing, and foreign banks are highly profitable mainly in large business transactions.

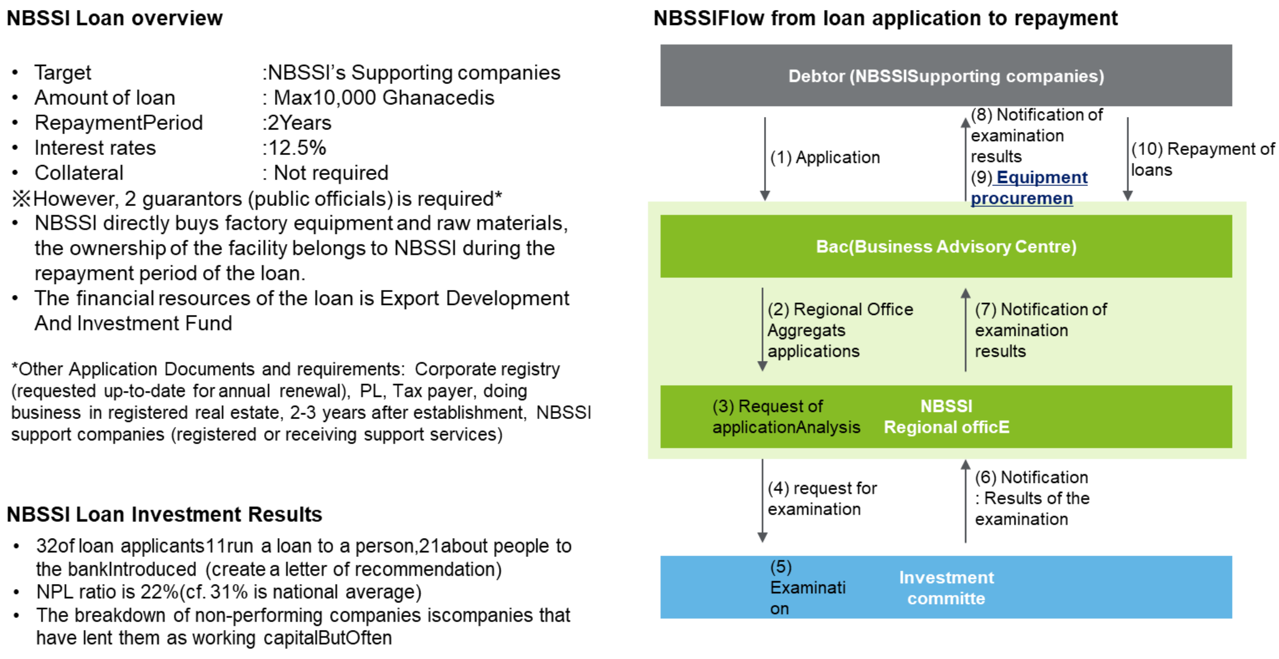
In order to reduce the credit costs of financial institutions, it is necessary to reduce the debtors' default risk, or to enhance the security of loans by securing real estate, etc., and minimize the loss amount when the debtor actually defaults. Although some countermeasures could be taken, immediate improvement is not likely to happen given the current business environment in Ghana.

Name	Bank A	Bank B	Bank C	MFI A	MFI B
Type	Commercial bank	Commercial bank	**Savings and Loans**	**MFI**	**MFI**
Summary	・Make corporate loans ・ Omni Bank and BSIC GH Bank merged in 2019 (reported that minimum capital adequacy is the main purpose) ・ Lending for MFI and SL ・ Has customers in the Oil, Gas and Energy industries * The manufacturing industry has low competitiveness and does not focus much on it	A government-affiliated commercial bank established in 1953 as a local commercial bank during the colonial era. In 1999, the company launched the Corporate banking unit.	・ Established Ghana branch in 2003	・ Applicable to individuals, companies, civil servants, SMEs, agriculture, construction industry, etc.	Established in 2012, operating business for 4 years with a business license from the Central Commercial Bank in February 2015
SERVICES FOR SMES	Focusing on this sector, including 90% of the total customer portfolio is SMEs.	4 departments from the three companies before the merger, comprising the SME 1D1F department and providing SME financing	Bayport is 90% private SMEs account for 70% of the total loan portfolio, with only 10% going to SMEs and MFIs	SME accounts for 70% of the entire loan portfolio (60% of 70% in construction)	・Customers are mainly micro-small seize. ・ More than half of customers trade
Loan amount	Average 50,000Cedi（10,000USD）	Unsecured: 500-1,000Cedi（100-1,000USD） Secured: 100,000Cedi～5million Cedi（10-20,000USD～1millionUSD (Trading and Manufacturing）	Car title: 25,000Cedi（4-5,000USD） SMEs loan: 60,000-80,000Cedi(12,000-16,000USD)	5-10,000Cedi(1-2,000USD) ※central bank regulates the maximum amount of loan offered by MFIs as 20,000Cedi/ customer（400,000JPY/ customer）	Secured: 20,000Cedi(4,000USD) Unsecured: 10,000Cedi(2,000USD)
Loan period	90days to 1year	Max 6 months	3-36 months	1～2 Years（average is 6 months）	1- 8 months

Interest rate	25%/ Year	Unsecured 27%/ Year Corporate loan 23-24%/ Year	・Car title 69,6%～125.2%/Year（4.5～7%/ Month） ・SMEs loan Min 101.2%/ Year （6%/ Month）	・101.2%/ Year（6%/ Month）	・SUSU：42.6～79.6%/Year（3-5%/ month）
Collateral	Real estate	Real estate	Cars	Bank deposit 'Car (200% of the loan amount), Real estate, guarantee, stock pile	Car, stockpile, land (Loans bigger than 5,000Cedi must be secured with collateral)
Procedure	Centralized system: Loan application → Sales department (initial diagnosis, portfolio management) → Review department (credit history, risk review, advice) → Review committee (permission)	・ In addition to reviewing application documents, start with a small loan to check the business feasibility and personality to improve the debtor's ability to pay.	・Examination based on application form	・In addition to reviewing application documents, conduct DD for customers	・Visit customer after receiving application ・ For those who have an account, also check the transaction history of the account
Assessment period	N/A	Unsecured: 48 hours From application till loan dispersement：3weeks to 1month	From application process to lending for 3	2-3 days	4days
Purpose of loan	More than 80% are WC (3 months to 1 year). Less than 20% for long-term financing (up to 5 years) for capital investment.	WC	Many are temporary, such as procurement for government procurement, or financing for importers to carry out import procedures after cargo arrives.	W/ C accounts for about 90%. The rest is capital investment	Business expansion, inventory, capital investment, etc., but 60% is spent on inventory purchase
NPL	60% for SMEs	'SMEs:18%	12-15%	40%（10% or less excluding construction related to government procurement）	17-20%

Table 3.1.2 Interview summary of financial institutions（Ghana）

NBSSI has also provides small loans to SMEs using EDIF (Export Development and Investment Fund) as a source of funding. It has provided 11 SMEs loans and referred 21 SMEs to financial institutions providing letters of recommendation. (Figure 3.1.2).



Reference）現地調査をもとに JICA research team

Figure 3.1.2 Summary of EDIF loan at NBSSI

(3) Financial service user (SMEs)

During the field survey, it was found out that issues SMEs are facing in regard to access to finance include (1) lack of ability to record and analyze financial and accounting data (required by banks), (2) lack of ability to create business plans and financial plans, (3) lack of collateral, and (4) the low awareness of debt repayment, indicating that small and medium-sized enterprises tend to have insufficient accountability of their business and financial literacy. In addition, although the demand for working capital of each companies differs from industry to industry, all of the interviewed companies have not seen the use of commercial bank loans, and two out of four companies have tried to raise funds for capital investment by subsidizing interest rates through the program offered by a public financial institution (EXIM Bank).

Company name			Company A	Company B	Company C	Company D
Summary	**No of employee**		342	15〜20	60〜80	35
	Sales		1.3 〜 1.6 million USD/ Yesr	N/A	1million USD+/ Yesr	1.4million GHS/ Yesr
	Business type		Apparel manufacturing, wholesale, and sales (design, manufacture, and sales of clothing and ornaments)	Manufacture and sale of cosmetics (development, manufacture, and sale of skin and hair care products)	Manufacture and sale of processed foods	Metal processing (manufacture and sale of household goods and interior goods)
	Business flow and payment terms	**Purchase**	Domestic suppliers (30% prepayment when ordering, 70% installment payment / cash / GHS after product receipt)	Domestic suppliers (before product receipt or at the time of product receipt / cash / GHS), overseas suppliers (wire transfer / USD)	Domestic Supplier (14 days after receiving the goods or after receiving the goods / cash payment / GHS)	7 domestic suppliers (2-3 weeks to 1 month after receipt of goods / cash payment / GHS)
		Sell	Domestic consumers (cash / credit card / GHS), Overseas buyers (pay 50% in cash upon delivery / 50% installment after delivery / US $)	Domestic retail (30-90 days after delivery / transfer / bills / GHS)	Overseas distributor (40 days before delivery / wire transfer / USD)	Customer (70% before start of production, 30% before installation / cash payment / GHS) * Up to 8 weeks from order to delivery
Funding needs	**Working capital**	**Loan amount and period**	N/A	3,000USD、6 months	N/A	N/A
		Detail	Raw material procurement (busy season from September to January), labor costs (quiet season	N/A（May-September harvest season）	N/A （Probably palm harvest time from February to October）	N/A
	Financing method for the above needs		Raw material procurement: NBSSI loan Labor costs: Over draft (6-8% per month)	Commercial Bank and EXIM Bank	Over draft	Own funds Rose funds from Steels development fund No interest in using loans due to high interest rates
	Capital investment	**Loan amount Period**	100,000 — 200,000USD 、 5 years	300,000USD	500,000USD、5 years	N/A
		Detail	Machine (sewing machine), IT system, etc.	Factory expansion	Warehouse expansion	Potential for factory expansion

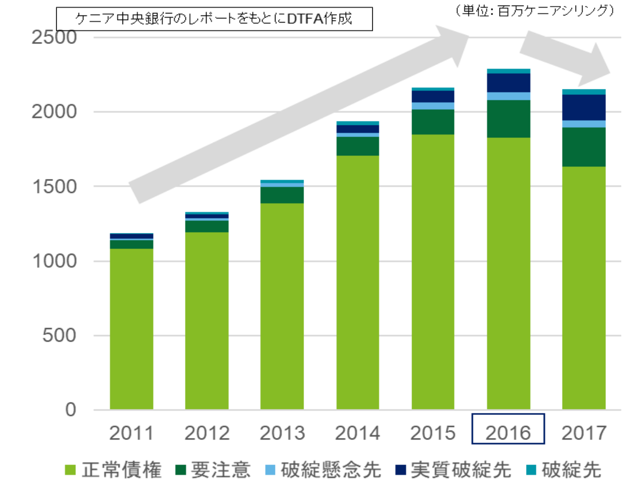
	Financing method for the above needs	**Status**	Not implemented	Filed	Filed	External funding
		Detail	Reason: Commercial bank loans do not have enough terms, requirements (interest rate, collateral) and complicated procedures	Procurement source: EXIM Bank Interest rate: 7% / year Collateral: land, buildings, cars Other conditions: Joint guarantor, acquisition of all shares in the event of default Judging period: 1-6 years Examination result: Accepted (2/3 of application amount)	Procurement source: EXIM Bank Interest rate: 14% Collateral: land, building (600 thousand USD) Examination period: N / A Examination result: Accepted	
Others			Other than financial access, I feel that electricity costs are an issue. I also feel challenges in accessing international markets. No expert is available for mass production training	Issues of access to finance and access to markets (0 exhibitions were decided due to book exhibitions and permission acquisition issues). There are not many technical issues	Unstable electricity and water	・ We cannot pay the labor cost and do not employ a sites supervisor. ・ Therefore, quality control is difficult. ・ In addition, if the customer's requirements are not satisfied, the number of redoes increases and labor costs increase. ・ Instability of power supply (use of generator, delay of lead time)

Table 3.1.3 Summary of interviews with SMEs（Ghana）

3.2 Kenya

3.2.1 Summary

Since the introduction of the loan interest cap in 2016, Kenya's financial institutions have been cautious about lending to relatively risky SMEs, as it has become difficult to set interest rates based on the risks of their lenders. In fact, according to the country's central bank, Kenya's overall lending balance maintained an average growth rate of 14% per year during the 2011-2016 period, but it turned negative in 2017 after the introduction of interest rate caps (Figure 3.2.1), and a similar trend was confirmed in the interviews.



Reference) [ケニア中央銀行, 2018]

Figure 3.2.1 Trends of loan balance in 2011-2017

On the other hand, as a medium-term trend, it can be confirmed that financial institutions' interest in the small and medium-sized enterprises in Kenya is high. From 2009 to 2013, in particular, domestic banks were actively increasing the percentage of loans provided to small and medium-sized enterprises (19.8% to 28.2%), and it is expected that many commercial banks are entering the market of the high-margin small business sector due to intensifying competition of the transaction market with large enterprises ([FSD Kenya, 2015]). Therefore, the market for small and medium-sized enterprise loans in the country may be revitalized even more by reducing transaction costs etc.

In addition, the spread of M-PESA (mobile money) developed for microfinance loan repayments in 2007 and the rise of the platform economy could dramatically change the competitive environment for small and medium-sized enterprise loans in the future. It is also characteristic of financial markets in the country that financial institutions are rushing into digitalization of their services, such as mobile lending.

3.2.2 Interview results

(1) Legal systems, policies, and infrastructure

According to FSD Kenya, the Kenyan government is working to improve financial access for small and medium-sized enterprises. Specific measures are as follows.

- There is an attempt to establish a credit guarantee fund in the Kenyan government (announced in April 2019), and they are developing a model to support capacity development and data management in addition to financial assistance, referring to the case studies of the republic of Korea and Chile.
- The SME advisory office was established directly under the Prime Minister, and the group oversees and promotes efforts to improve SME's financial access.
- Kenya's corporate tax is 30%, but there is a program called "Turnover tax" for SMEs with annual sales of 500,000 to 5,000,000 shillings in which the companies can enjoy lower tax rate of 3%, and quarterly tax payment.

In addition, KNCCI has been considering and implementing initiatives that focus on financial access in particular as part of support for small and medium-sized enterprises as follows.

- In partnership with the Kenya Bankers Association (KBA), the company jointly offers the INUKA program to improve financial literacy among small and medium-sized enterprises (Figure 3.2.2). The INUKA program currently provides online training and Face-to-face training, but financial institutions are also considering using the program's database for loan assessment in the future.
- In order to meet the requirements of the bank that provides the loan, there is a plan to establish a SME hub to perform capacity building of SME in cooperation with commercial banks (support content is provided, membership, market access, public procedure one stop provider, consulting, etc.)
- In an initiative called SME exchange program, they are considering measures to promote new initiatives to improve Financial Access for SME, such as crowdfunding.
- They are also considering establishing a fund for SME and startups at KMCCI (it is assumed that the Chamber of Commerce will become fund managers and will be funded by Chamber of Commerce and Industry members and partnership companies and institutions)

INUKA Program Overview	
Purpose	(1) Formalization of small businesses, (2) strengthening management capabilities of small businesses, and (3) optimizing operations and improving productivity of medium-sized companies, (4) Improved access to financial services provided by banks
Target	Small and medium-sized enterprises in Kenya *inukaThe program defines small and medium-sized companies as follows • Small businesses: including informal sector/annual sales1MillionKshLess than/Employee10(full-time1 - 5name) / Lowest since the establishment1Years • Small Business: Formal Sector/Annual Sales1 - 30MillionKsh/3MillionKshAssets/Employees held above5 - 30First name (full-time2 - 20name) / Lowest since the establishment2Years • Midsize Companies: Formal Sector/Annual Sales50 - 250MillionKsh/4MillionKshAssets held by/Employee30 - 150Name(Full-timeThe <a0>10 - 50name) / After the establishmentMinimum3Years
Service	① Online training (subjects: entrepreneurship education, financial management, business and strategic planning, operations,VcManagement, Marketing Business Communications,HRManagement, Legal Affairs, etc.) ② Face To FaceTraining (Limited to Nairobi and Nakuru area.)KNCCland other organizations to provide training) ③ Database of corporate portfolio(KBAthere is a center andand trainingreflecting the history of the course, etc.Credit Scoring Model Create aDo(tentative)
Challenges	• Struggling with attracting banks to participate in the platform while a few banks are interested in collaborating with the service and receiving training session for their customers

Reference） Website of INUKA

Figure 3.2.2 Program summary of INUKA

(2) Financial service provider (Financial institutions)

During the field survey, the following four issues were cited at the interviews with the financial institutions.

- The loan interest rate cap, introduced in September 2016, has had a significant impact on the financial sector as a whole, and financial institutions have been unable to price loans in accordance with risks, and the loan balance has decreased.
- With the reduction in interest rates for loan transactions with large enterprises, the financial institutions are interested more in financing SMEs (including some foreign banks)
- Most banks are reluctant to provide loans to new businesses (startups)
- MFI has high procurement costs, high NPL ratio, and high loan interest rates for small businesses.

In addition, it was found that the digitalization of services, including mobile lending, mainly for individuals, is progressing, as financial institutions' small and medium-sized enterprise loans have been sluggish due to the introduction of interest rate caps.

	Bank A	Bank B	Bank C	MFI A
Type	Commercial bank	Commercial bank	Commercial bank	MFI
Summary	Equity Group, founded in 1984, is Kenya's second largest commercial banking group and offers a wide range of services to East African countries around Kenya.	Commercial bank, founded in 1962 and headquartered in Nairobi	THE COMPANY is Kenya's largest commercial bank group, founded in 1896. It has been deployed in East African Region, including neighboring countries in Kenya. Government intervention.	In 1982, it started lending as an NGO, and in 2010 under the control of the Central Commercial Bank, began depositing.
Customer portfolio	N/A (SME customers numbers 18-20,000)	Startup 0% Micro 1% SMEs 11% (7 billion Ksh) Large companies 70% Retail 18%	**SMEs 3% (22 billion Ksh)** **Other 97%**	Focuses on Miro / Small Enterprise business loans over consumer loans 90% of its customers is women
Definition of SME	Number of employees: less than 100 Sales: 800 million Ksh or less	Number of employees: less than 100 Sales: 750 million Ksh or less Loan amount: 100 million Ksh or less + Corporate governance	Sales: 10 million to 1 billion Ksh Loan amount: 5 to 215 million Ksh	Loan amount: about 100-1000USD
Collaboration with M-Pesa	None (the company provides its own mobile lending service in cooperation with its group companies)	M-Shuwari	M-Pesa Loan	Yes (but the company do not use customer and Safaricom transaction data to target existing customers)
Interest rate	13% (CBR + 4%) + Facilitation fee, Cost of nego charge / evaluation of the property etc. * Many commercial banks have increased their investment in government bonds since the interest rate cap regulation was introduced in 2016		22%	
Challenges on SME finance	-Lack of sufficient collateral -Lack of accountability and transparency (books, transaction records, audited financial statements) -Diversity of business models and business practices of SMEs, and liquidity of the company itself (business format changes in a short period of time, etc.))		Large number of defaults by government procurement companies (The latest application shows a cautious stance on SME financing, such as allowing only 2 out of 95 companies)	
Expectation on JICA assistant	1. Capacity building of clients and staff (back office, operations, sales manager) 2. Minimize operation costs using technology 3. In order to compensate for the reduced risk that commercial banks can bear with the introduction of interest rate caps, it is necessary to create a mechanism to reduce the risk of SME loans, such as credit guarantees			
Business model	Micro-oriented	Supply-chain oriented	Micro-oriented	N/A

Reference） JICA research team

Table 3.2.1 Summary of interviews with financial institutions（Kenya）

(3) Financial service user (SMEs)

In the field survey, SMEs mainly cited (1) the lack of capacity to create business plans and financial plans, (2) lack of knowledge of financial realities and loan transactions, (3) low awareness of repayment obligations, and (4) lack of collateral as their challenges in terms of access to finance. Some small and medium-sized enterprises are aware that it is necessary to accumulate financial information such as the transaction history of bank accounts so that banks can recognize them, and to secure sufficient collateral, in order to make it easier for small and medium-sized enterprises to receive loans from commercial banks. It was also mentioned that it is important to improve management skills as well as financial accountability. The below chart shows the summary of the interviews with local SMEs in Kenya.

Company name	Company A	Company B	Company C
Foundation	2000	2003	2009
No of employee	51－200	15-20	1,000
Industry	Chemicals, manufacturing	Food service and retail	Wholesale, retail
Customers	More than 3,000 retailers	Restaurant: Kenyan locals Super: Nairobi resident	Local consumers
Suppliers	N/ A	Japanese and Korean food manufacturers, local butchers, and farmers owned by Jinya	500 suppliers (80%: SME, 20%: Multinational)
Funding information	We negotiate payment terms with our business partners and raise working capital by adjusting the cash flow of Accounts Payable *) * Payment terms: [Purchase] 1-3 months after receiving the goods [Sale] Within 60 after delivery * Payment method: M-PESA 20%, cash 20%, commercial bank remittance 20%, check 50% (M-PESA and cash income are deposited in the Commercial bank account to visualize business conditions) ⇒ Commercial bank Can make loan transactions with confidence	Considered the use of a bank loan to launch a new Japanese restaurant, but was rejected at the end of the one-year review period Loan amount: 5,000,000 Ksh Duration: 4 years Purpose: Launch new business (restaurant) Application: Barclays, Caritas bank (MFI) Interest rate: NA Collateral: land, real estate Judging period: 1 year Result: rejection	-Reported on a monthly basis with a huge investment from Mauritius PE (Adenia Partners) (procurement amount and investment ratio are not disclosed) -In response to the above, the company announced a business expansion plan of 2 million USD (2 new stores near Nairobi and 220 new jobs)
Bottle neck on access to finance	-Companies tend to lack management, purpose, and strategic awareness for business growth -Since SMEs' financing activities involve many transactions involving cash and M-PESA, there is no record and lacks transparency and accuracy -Commercial bank's attitude toward SME finance - After the introduction of the interest rate cap, Commercial Bank became reluctant to lend to micro and small enterprises (its customers)	-Managers and the Commercial Bank need to understand the risks, screening, repayment ability, business management, and required loan period well → The restaurant had difficulty communicating with the Commercial Bank when starting up the restaurant -Insufficient information on financial services available to small and medium-sized enterprises → Reports on IMF / WB support for Equity bank in SME finance field, but did not lead to actual service provision	-SMEs are often operated by one dictatorial business owner, with low bargaining power on commercial banks and no loan products matching their business characteristics. Therefore, the company does not set payment terms on a cash term basis -SMEs need strategic perspectives, management, systems and human resources to realize strategies - Commercial bank does not understand business practices and business models for each SME and industry

Reference） JICA research team

Table 3.2.2 Summary of interviews with SMEs（Kenya）

Chapter 4 Proposed JICA’s Projects

4.1 Methodology of project screening

Firstly, the survey analyses the bottlenecks of each factors in SME finance; 1) User (SMEs), 2) Player (Financial Institutions), and 3) Infrastructure (Legal framework and policy), then it identifies the possible countermeasures to resolve those bottlenecks as an initial hypothesis（Figure 4.1.1）. Then, the shortlist of the project selections was made after evaluating feasibility, impact, limitations of each option based on the result of the verification of the initial hypothesis during the first on-site survey（Figure 4.1.1、Figure 4.1.2）. Finally, the survey team formulates detail project plan of the options with the highest evaluation results among those from the shortlist and discussed about the concepts of those projects with the potential counterparts (namely financial institutions and industry associations) during the final on-site survey to brush up the plans.

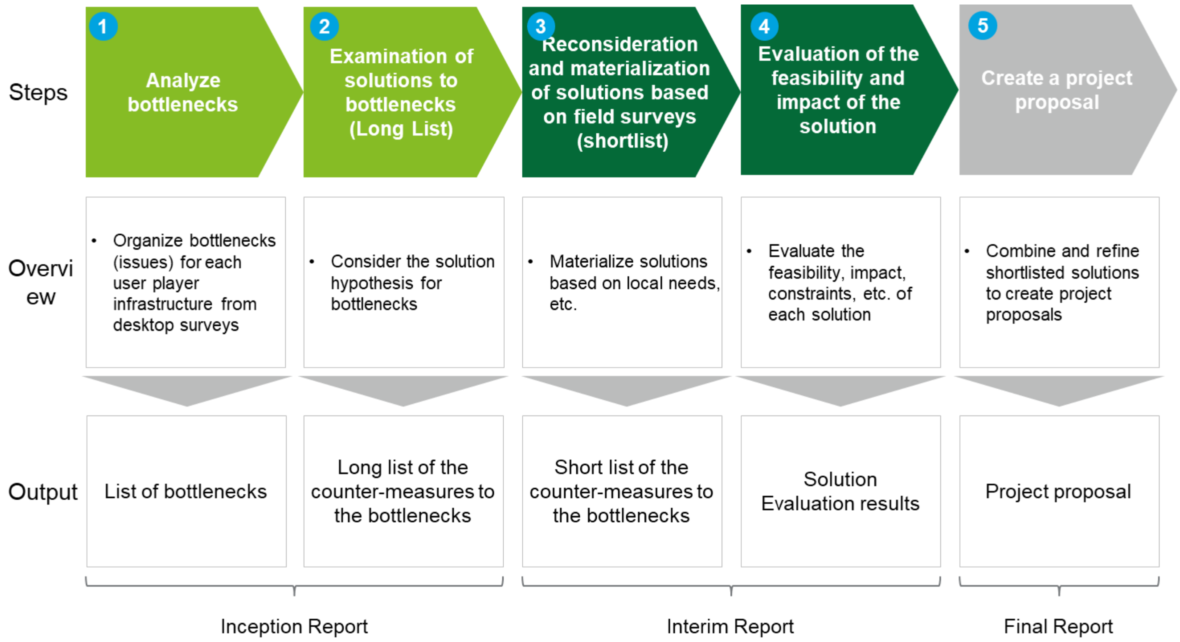


Figure 4.1.1 Steps of shortlist formulation

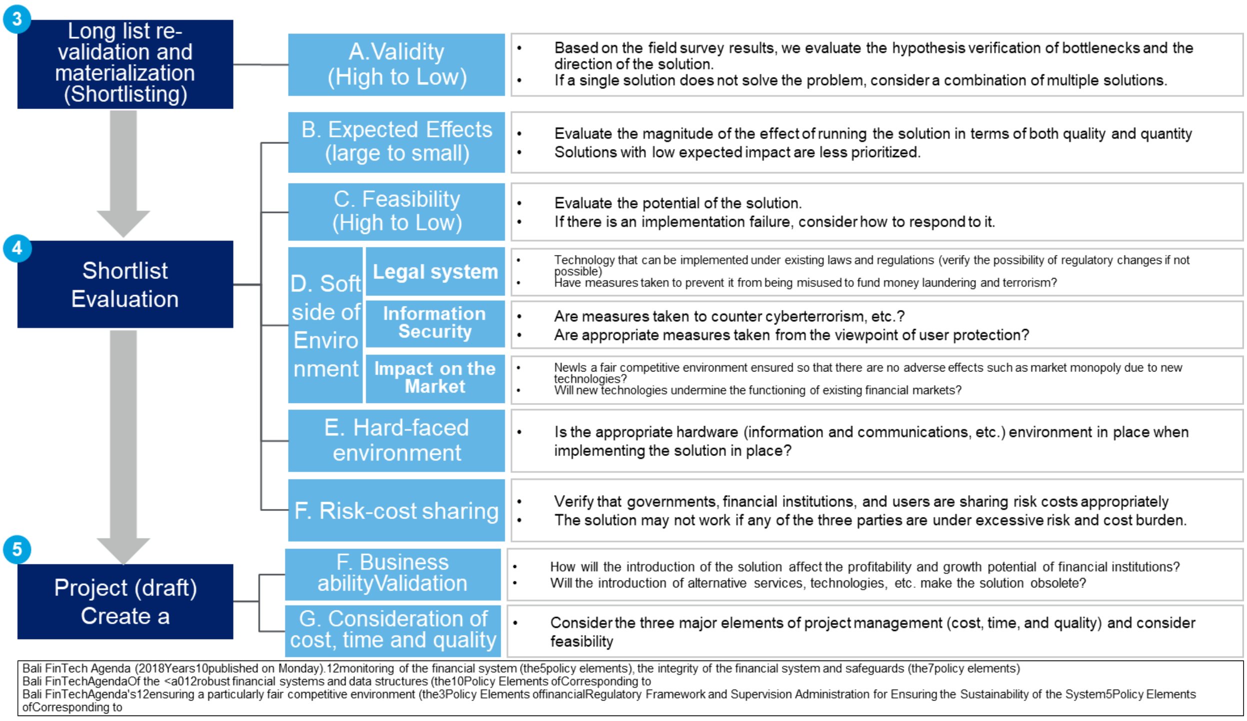


Figure 4.1.2 Shortlisting procedures and refinement criteria from the creation of a project

4.2 Background and introduction

As mentioned earlier, the biggest challenges regarding access to finance in Africa is the high cost of credit and operation cost resulting in the increase of loan interest on SME credit. In addition, in the case of Kenyan market, it seems that an interest rate cap imposed by the government ended up causing the situation where the SMEs with low credit confronted the difficulties on securing credit serviced from commercial banks and MFIs. Considering those backgrounds, the survey team lined up the options to solve the challenges that both financial institutions and SMEs are facing. Furthermore, the survey examined the options such as promoting collaboration between governmental financial institutions, JICA's project counterparts and other key players of the market such as business development centres since the SME finance in Africa is still considered as a high risk market for the commercial banks to operate their business.

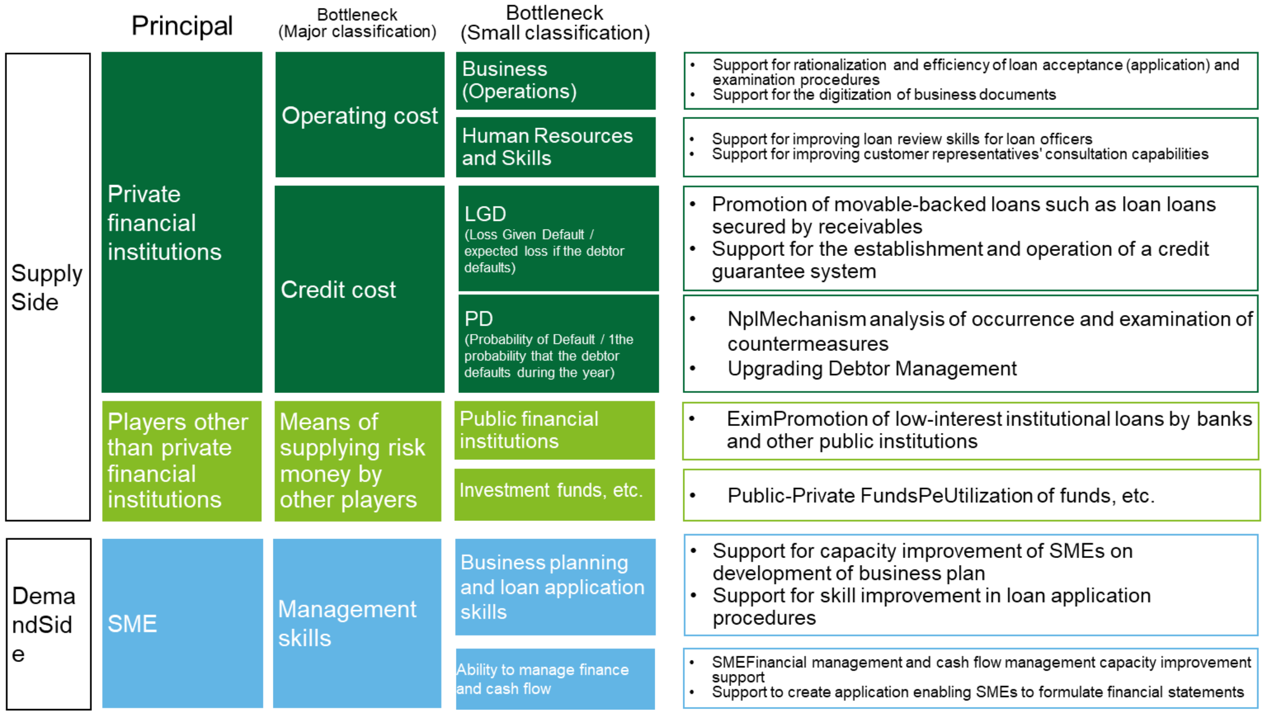


Figure 4.2.1 Direction of improvement of access to finance in Ghana and Kenya

4.3 Ghana

Based on the challenges of financial institutions (lack of credit management capabilities of financial institutions) , SMEs (lack of collateral, lack of data creation skills for making loan decisions / shortage of future business plan formulation skills), and infrastructure issues (lost credit guarantee system, underdeveloped SME support institutions) found in this survey, there are seven directions for assistance ((1)Export Loans secured by loans related to corporate exports, (2) support for the operation of credit guarantee systems, (3) analysis of mechanisms for the occurrence of non-performing loans and study of countermeasures, (4) promotion of SME loans by public financial institutions such as EXIM Bank, (5) investment in SMEs (Figure 4.3.1): Establishment of a loan fund (public-private fund), (6) providing consultation for formulation of business plans, and (7) support from supporting organizations such as NBSSI.

To promote SME financing in the banking sector, it is essential to set appropriate interest rates in response to risks that the private financial institutions face and lower the NPL ratio. However, in view of the current situation where Ghana is experiencing a drastic transition toward a sound banking sector, we have considered other ways to supply risk money other than lending done by commercial banks, and narrowed down to seven options of support measures as described in the below chart.

4.3.1 Project shortlist

	Direction of support	Partner (candidate)	Specific measures	Points to remember	Purpose
①	**Loans secured by claims on exports of export companies**	GAB, financial institutions, etc.	Support the development of financing schemes secured by loans to importers from other countries through GAB while referring to other countries' L / C settlement initiatives[3]	Entry barriers vary depending on the target export items, so design of support methods needs to be considered	Assist export companies in financing from export to settlement and promote exports
②	**Credit guarantee system operation support**	Ghana Government	Assist in formulating and implementing a roadmap for introduction while referring to other countries' systems	May involve significant financial expenditures and require long-term support before implementation	Helping financial institutions reduce risk and increase lending to SMEs
③	**Analysis of NPL generation mechanism and study of countermeasures**	GAB (Commercial bank association) and financial institutions	Analyze the impact of the elements (parameters) that make up the NPL, and clarify points to keep in mind when lending	Requires the cooperation of a commercial bank that provides a database that can be analyzed	Examining drastic countermeasures by elucidating the mechanism of NPL generation
④	**Promotion of SME financing by public financial institutions such as EXIM Bank**	Government financial institutions	Confirm the current status of financing transactions by public financial institutions, identify the sector, company size, use of funds, etc., and support the creation and operation of financial schemes	Because it is a public financial institution, it takes time to coordinate with regulatory agencies, etc.	Promote financing for SMEs by establishing and operating a financing scheme for SMEs
⑤	**Establishment of SME investment and loan fund (public-private fund)**	Ghana government	Establish an investment and loan fund for SMEs and support system design, organization start-up and operation, etc., so that long-term investments can be made, especially for companies with high growth potential	Takes time to coordinate with Ghana government	Enhance investment and loan for SMEs through establishment and operation of investment and loan funds for SMEs
⑥	**Provision of consultation for formulation of business plans**	GAB・NBSSI	Financial institutions and BDS (NBSSI, etc.) collaborate to provide support for SMEs so that SMEs can create appropriate business plans and loan application documents, submit the documents (business plan / financial application) to financial institutions and raise funds. Providing necessary support so that we can procure	Since the expected effect differs depending on the setting of the target person, the design of the support method needs to be considered	Revitalization of loan transactions by supporting SME capacity improvement
⑦	**Supporting measures by support organizations such as NBSSI**	NBSSI etc	NBSSI will provide SMEs with the necessary support to receive financing from financial institutions, and use information and data obtained at each site to improve the consultation effect	It is necessary to confirm NBSSI's plan and system and evaluate the expected effects	Strengthen technical support for SMEs and promote financing for SMEs

Table 4.3.1 Short list of proposed projects（Ghana）

3 In trade transactions, other countries are actively developing trade finance platforms utilizing blockchains. In Singapore, a startup called DLT Ledger is already making L / C payment transactions in international trade. The Deloitte Group also develops the Hong Kong Monetary Authority and the Trade Finance Platform in Hong Kong.

4.3.2 Evaluation of the shortlisted projects

As a result of evaluating the above support measures, this survey identified "④ Promotion of SME financing by public financial institutions such as EXIM Bank", "⑥ Consultation for formulation of business plans, etc." , and "⑦Supporting BDS providers such as NBSSI" as possible measures to be implemented.

As mentioned above, the increase in the minimum paid-in capital of financial institutions, which took place in 2018 in Ghana, was expected to strengthen the banking sector and strengthen its competitiveness in the long term, but in the short term, the financial market in Ghana is expected to continue to be affected by the restructuring of the financial industry. On the other hand, there are government/ donor funded finance institutions actively offer risk money with low financing costs in the form of directed credit programs for SMEs and subsidy in the country. For this reason, to formulate projects which contribute to the efficient allocation of financial resource to small and medium size businesses, the survey also examined the possibility of collaborating with government/ donor funded finance institutions in addition to cooperating with private financial institutions.

Measures	A.Validity	B. Expected Effects	C. Feasibility	D. Soft environment	E.Hard-faced environment	F.Risk &Cost sharing	Overall rating
(1)ExportThe claims pertaining to the exports of the company were secured.Loan	○	△Limited target companies	△Creditworthiness of exportee companies required	○	○	- Creditworthiness of exportee companies required	△
(2)CreditOperation of the guarantee systemSupport	◎	△	△ Policy formulation is necessary to increase the financial burden	△	○	- The government's financial burden	△ The financial burden is expected to increase.
(3)NplMechanism analysis and countermeasures for occurrenceStudy	◎	○	△ Data provision by financial institutions is assumed.	○	○	○	○
(4)Eximby banks and other public financial institutionsSMEof loans forPromote	○	△	△ Need to confirm the stance of financial institutions	○	○	- Increased risk of public financial institutions	△
(5)SMEinvestment and loan funds (public-private funds)Established	○	△	△ Need to confirm investment-related laws and regulations	△	○	- Increased risk burden on public and private sectors	△ Investment-related legal system confirmation required
(6)formulation of business plans, etc.Consultation for	○	△ The effect is limited only by this measure.	○	○	○	○	○
(7)NBSSIMeasures of support organizations such asSupport	○	△ The effect is limited only by this measure.	○	○	○	○	○

Figure 4.3.1 Result of evaluation shortlist

4.3.3 Project proposal

(1) Collaboration model with financial institutions aiming to enhance access to finance on each phase of the corporate life-cycle

1) Objectives and overview of the project

In this survey, a collaboration model with financial institutions was formulated as a project (draft) to promote SME financing by public financial institutions such as EXIM Bank in the above short list, and to support measures of supporting institutions such as NBSSI.

The ultimate objective of SME support is to support the sustainable growth of SMEs which are the foundations of domestic industry, and create stable employment. To this end, it is essential to provide seamless financial services according to the growth curve of the company, by grasping the phase of the business life cycle, its funding needs, and corresponding funding providers, and formulating and implementing an activity which enhances collaboration among the institutions supporting SMEs.

2) Scope of the project

Phase	Main scope of work
① Identification of project partner	Player mapping
	Research and analysis on players
	Setting criteria
	Identify project partner
② Design of collaboration model	Conceptualize collaboration model
	Design collaboration model
	Discussion and agreement on the model with related parties
③ Verification of collaboration model	Preparation for the verification test
	Identify items to be tested
	Conduct verification test
	Evaluation of verification result
④ Implement the model	Preparation for implementation (including human resource development)
	Operation and improvement of the model

Table 4.3.2 Scope of proposed project (Ghana)

3) Schedule

Below chart shows the implementation process of the project.

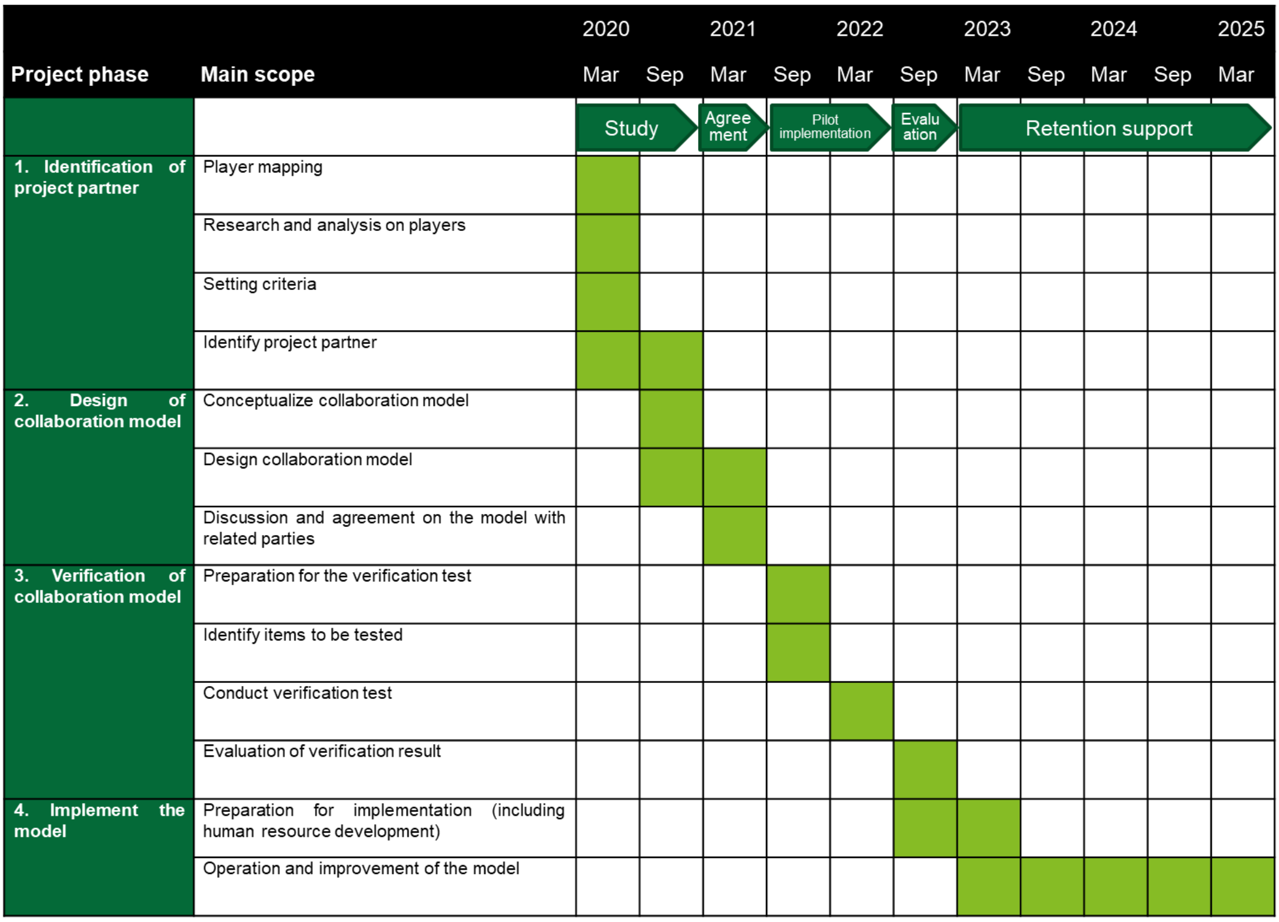


Figure 4.3.2 Implementation plan of the project（Ghana）

4) Project structure

The below figure shows the structure of the project.

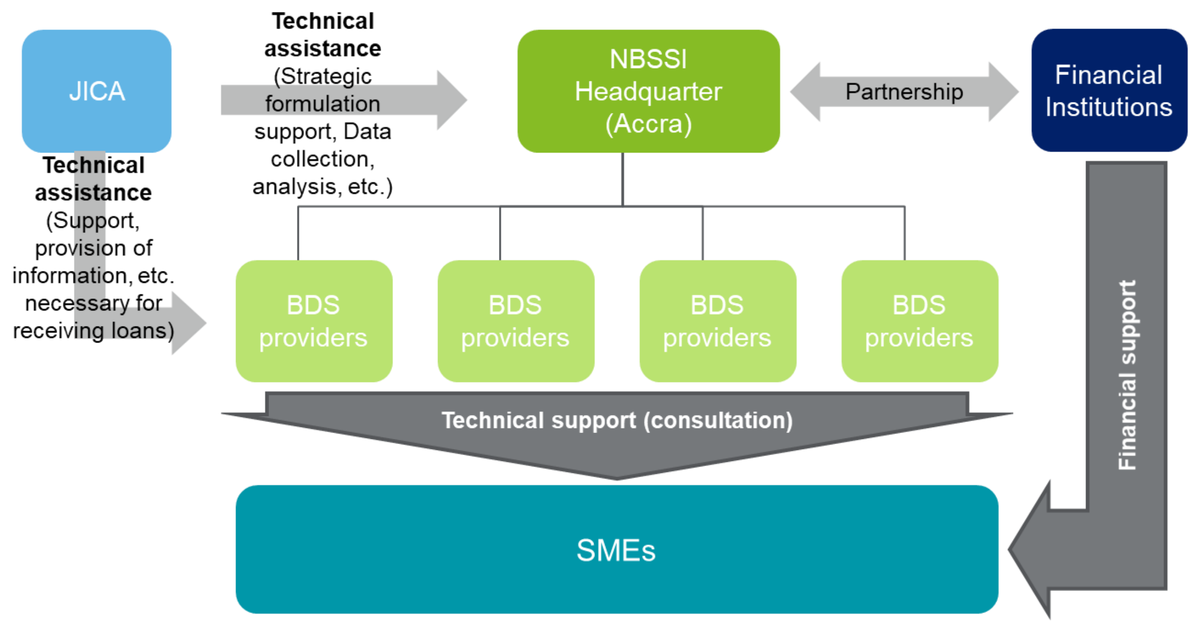


Figure 4.3.3 Structure of proposed project team（Ghana）

5) Points to consider

In regard with the project "④ Promotion of SME financing by public financial institutions such as EXIM Bank", below points need to be concerned.

Demand	①Corporate life cycle	• Since funding requirements vary depending on the growth stage of the company, appropriate candidates for the cooperation will be selected according to the segments targeted in this project. • In the entrepreneurship and founding stages, the financing scale is small and the default risk is relatively high. The larger the company, the larger the financing scale and the lower the default risk. Larger companies also have more collateral.
Demand	②Fund needs and size	• Depending on the nature of the funding needs, different financing schemes may be appropriate. • For example, for short-term working capital needs, a scheme such as accounts receivable-secured financing is conceivable. However, for business stabilization of companies, financing needs such as long-term working capital are also conceivable. • In the case of capital investment funds (factory construction, production equipment purchase, etc.), the amount of money is large and long-term borrowings are required, and the size and setting period of institutional loans (funds, etc.) must also be considered.
Supply	③Financial soundness and business model of financial institution	• Since the coordination model is greatly influenced by the business model of the cooperating financial institution, it is necessary to grasp and analyze the transaction channels (store network, mobile banking, etc.), customer segments, profitability, etc. of the institution. • Although there is an interest in cooperation, it is assumed that it is difficult for financial institutions with unstable management bases to provide sufficient funds, so it is necessary to cooperate with financial institutions with some physical strength.
Supply	④ Risk tolerance of financial institutions	• It is important to establish a coordination model in which the default risk on the demand side and the risk tolerance of the financial institution match. • It is essential to cooperate with small but highly risk-tolerant fund providers (such as angel investors and impact investors) for the funding needs of the entrepreneurship and founding phases. However, the risk tolerance is not high, but the scale of financing is relatively large, so cooperation with banks is required.

Figure 4.3.4 Points to consider in regard with the collaboration model with financial institutions

In addition, regarding "⑥Consultation for formulation of business plans, etc.", it is important to deepen the understanding of banking transactions and promote good business relationships with financial institutions by providing SMEs the technical assistance in collaboration with financial institutions and other institutions that provide technical assistance to SMEs such as BDS institutions. Regarding the implementation of this project, the following points need to be considered.

(1) Since it is unlikely that the BDS institution also has sufficient knowledge on banking services, the capacity of BDS institution staff is also essential.

(2) Since it is assumed that financial institutions do not have sufficient capacity to provide management guidance to SMEs, it is important to understand the baseline (capacity) of staffs of financial institution.

4.4 Kenya

Although Kenya is affected by the lending cap in the short term, financial institutions continue to show positive attitude towards financing the SME sector in the domestic market. Also, it is expected that SME finance could be further promoted by reducing credit costs (impairment costs) and operating costs. The support measures in Kenya are as follows.

Throughout the survey, key challenges in terms of improving access to finance was found in each players; i) financial institutions faces issues such as insufficient screening / loan execution operations, lack of consulting skills for SMEs, lack of credit management capabilities of financial institutions, ii) SMEs are facing issues including lack of skills in preparing materials for loan decisions, lack of skills in formulating future business plans, and finally iii)the challenges regarding the infrastructure includes inadequate credit guarantee system, underdeveloped SME support organization. Based on the above, there are seven directions of support (1) development of a screening platform, 2) consultation seminars for loan officers, 3) operation support for the credit guarantee system, 4) analysis of the mechanism of non-performing loans and study of countermeasures, 5) formulation of business plans. For consultation, 6) Supporting measures by supporting organizations such as KNCCI (Kenya), 7) Developing applications to create financial data It narrowed down to (Figure 4.4.1).

4.4.1 Project shortlist

	Direction of support	Possible project partner	Detail	Consideration	Purpose
①	Development of screening platform	KBA ・ financial institutions	Introduce platform (app) to standardize different loan application procedures and documents by each financial institution	Large coordination and coordination costs with financial institutions, especially KBA	Smooth loan transactions by standardizing loan application and screening procedures
②	Holding consultation workshop for loan officers	KBA ・ financial institutions	Through KBA, improve loan consultant's SME consulting skills at Kenyan financial institutions	It is assumed that appropriate human resources are nominated from financial institutions	Strengthen consulting skills of financial institutions to enhance SME capabilities
③	**Credit guarantee system operation support**	Kenya Government	Assist in formulating and implementing a roadmap for introduction while referring to other countries' systems	May involve significant financial expenditures and require long-term support before implementation	Helping financial institutions reduce risk and increase lending to SMEs
④	**Analysis of NPL generation mechanism and study of countermeasures**	KBA (Commercial bank association) and financial institutions	Analyze the impact of the elements (parameters) that make up the NPL, and clarify points to keep in mind when lending	Requires the cooperation of a commercial bank that provides a database that can be analyzed	Examining drastic countermeasures by elucidating the mechanism of NPL generation
⑤	**Provision of consultation for formulation of business plans**	KNCCI, KIBT	Financial institutions and BDS (KIBT, etc.) collaborate to provide support for SMEs so that SMEs can create appropriate business plans and loan application documents, submit the documents (business plan / financial application) to financial institutions and raise funds. Providing necessary support so that we can procure	Since the expected effect differs depending on the setting of the target person, the design of the support method needs to be considered	Revitalization of loan transactions by supporting SME capacity improvement
⑤	**Supporting measures by support organizations such as KIBT**	KIBT etc	KIBT will provide SMEs with the necessary support to receive financing from financial institutions, and use information and data obtained at each site to improve the consultation effect	It is necessary to confirm KIBT's plan and system and evaluate the expected effects	Strengthen technical support for SMEs and promote financing for SMEs

⑥	Application development for financial data creation of SME	KNCCI･KBA	Financial data can be easily created from SME deposits and withdrawals, transactions, etc., and financial institutions can use the created financial data as material for loan screening. (Company diagnosis and scoring using the created financial data, and the results are used by the SME for management decisions and improvements.)	Carefully consider development procedures to ensure competitiveness and fairness	Smooth loan transactions by developing and analyzing financial and accounting information of SMEs (borrowers)

Table 4.4.1 Shortlist of proposed projects（Kenya）

4.4.2 Evaluation of the shortlisted projects

As a result of evaluating the above support measures, this survey identified “①Development of loan application / examination platform”, and “④Analysis of NPL generation mechanism and study of countermeasures” as possible measures to be implemented in Kenya.

KBA and KNCCI are aiming to improve financial access through strategic partnerships, such as jointly offering the INUKA program to improve the financial literacy of SMEs. The INUKA program currently offers online training and face-to-face training. Furthermore, financial institutions are considering using the database of the program for loan screening. However, there is a room for implementing support for strengthening collaboration with financial institutions on the platform.

On the other hand, during the second field survey, the project was discussed with three commercial banks in the country, and those banks were skeptical about the online platform in terms of differentiation from other market competition. In addition, since financial institutions have already independently analyzed and improved its rating model, additional discussions on developing future projects may be required.

Measures	A.Validity	B. Expected Effects	C. Feasibility	D. Soft environment	E.Hard-faced environment	F.Risk and cost burden	Overall rating
(1)LoanDevelopment of application and screening platform	◎	◎	△ KBANeed to confirm the progress of the review status of	△	△	○ Financial institutions	◎
(2)LoanConsultation with the person in chargeHeld a workshop	○	△ The effect of this measure alone is limited.	○	○	○	○	○
(3)CreditGuaranteeSupport for institutional operation	◎	◎	△ Policy formulation is necessary to increase the financial burden	△	○	△ The possibility of increasing the government's financial burden	○ Feasibility is carefully considered
(4)NplMechanism analysis and countermeasures for occurrenceStudy	◎	◎	△ Providing data from financial institutions is essential	○	○	○	◎
(5)BusinessConsultation for planning	○	△ What is the effect of this measure alone?Limiting	○	○	○	○	○
(6)KNCCIOne-stop service support for	◎	◎	△ KNCCIConfirmation of the progress of the study status by	△	△	○	○ KNCCIneed to confirm the structure and infrastructure of
(7)FinancialApplication development for data creation	◎	◎	○	△	△	○ Financial institutions also need to bear some of the costs.	○ Assumptions that the contents of the service will change during the development process

Figure 4.4.1 Result of shortlist evaluation

4.4.3 Project proposal

(1) NPL analysis and prevention

1) Objectives and overview of the project

To promote lending to SMEs in the banking sector, it is essential to lower the NPL ratio of private financial institutions, and there seems to be room for study on improving credit judgment and strengthening credit management capabilities. The purpose of this project is to identify the mechanism of NPL generation in SME financing and to present countermeasures, and receive and analyze SME financing-related data from selected target financial institutions.

2) Scope of the project

In this project, a JICA consultant team will select and negotiate candidates for financial institutions to be analyzed, receive data, examine the possibility of its analysis, and negotiate for an agreement on data reception and analysis.

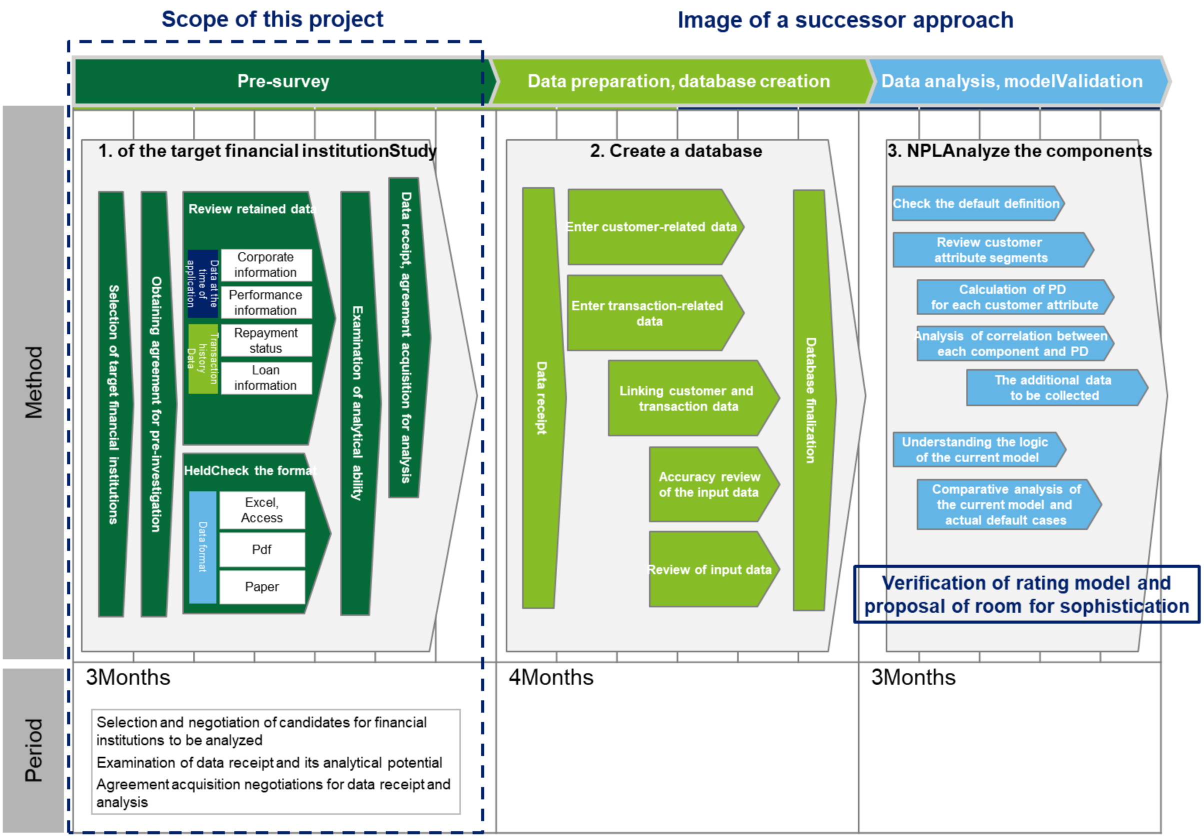


Figure 4.4.2 Approach of NPL analysis

3) Schedule

This preparatory survey takes approximately 4-6 months.

4) Project structure

Team up an NPL analysis team that leads negotiation and receiving agreement with/ from the financial institutions to be analyzed, and examination of the possibility of data analysis.（Figure 4.4.3 Project structure of the NPL analysis program)。

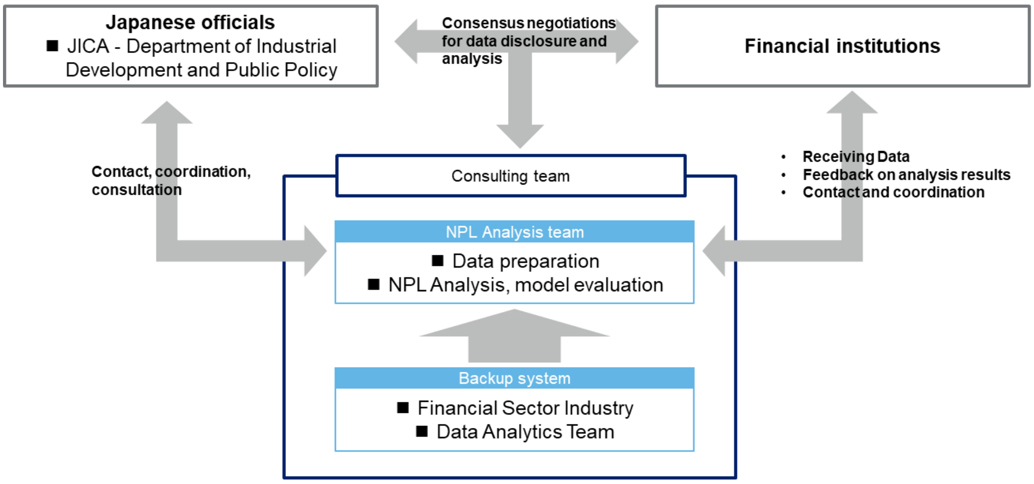


Figure 4.4.3 Project structure of the NPL analysis program

5) Points to consider

Considerations for this project include the possibility that consent for data provision may not be obtained from the financial institution that is the candidate for analysis. Also there is a possibility that data analysis may not work due to data management system, data volume, and data retention format etc.

(2) Loan application/ assessment platform development

1) Objectives and overview of the project

Conventionally, the convenience of users could be increased and the financial burden on the financial institution when accepting loan applications could be lowered by standardizing the information and data required for the loan procedures which have been scattered by each financial institutions. The purpose of this project is to streamline the financing process through development and operation of a loan application/ examination platform. The draft of the platform is created by going through the current loan application/ examination process at financial institutions.

2) Scope of the project

In this project, we will collect information on loan application procedures, organize and analyze information required by financial institutions in loan application procedures, identify information that financial institutions need to collect and enter when creating a loan platform, form a blueprint of the loan platform, and examine the process for implementation of the platform (Figure 4.4.4).

	1 Collecting information on application procedures	2 Organizing and analyzing information required by financial institutions in the application process for loans	3 Identify the information that financial institutions should collect and enter when creating a loan platform	4 Initial Examination of Loan Platform Concept (Draft)	5 Review of the process for project implementation
Overview	• In the loan application procedure, ask multiple financial institutions what information the financial institution obtains from SMEs and what kind of application procedure they are seeking	• In the application process for a loan, a financial institutionSMEsOrganize and analyze the information to be obtained from	• When you launch a loan platform, you need to use the concept and execution process to streamline the loan application process.Consider	• Form the concept of the entire platform	• Discuss the financing platform concept (draft) and its implementation process discussed in (4) with related organizations
Method	Hearing survey with local financial institutions	Desktop analytics	Desktop Analysis	Desktop Analysis	Discussion
Place	Local	Domestic	Domestic	Domestic	Local
Period	0.5Months	0.5Months	0.5Months	0.5Months	0.5Months

Figure 4.4.4 Process of verification of the idea of loan application platform

3) Schedule

It will take approximately 6.0 to 8.0 months for the initial study of the loan platform concept (draft) and formulation of implementation plan.

4) Project structure

Build a team for platform construction study and conduct on-site interviews, discussions, and build a prototype of the platform (Figure 4.4.5)

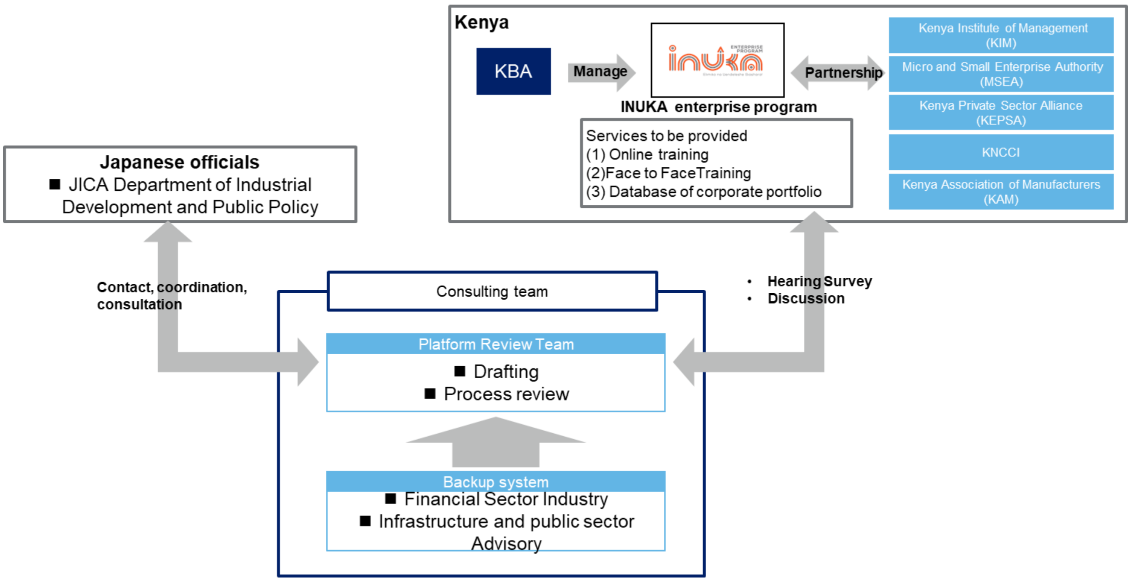


Figure 4.4.5 Structure of project team for loan application and assessment platform (proposal)

5) Points to consider

A concern of the project is that commercial banks in Kenya are skeptical about online platforms because the loan application screening is one of their factors that differentiate them from their competitors in the market.

Chapter 5 Conclusions and recommendations

While this survey examined the direction of improvement of access to finance of SMEs in Ghana from west Africa and Kenya from east Africa among the other countries in the region, it was found that the ideal measures to address the issue varies due to the difference of the external environment surrounding financial sector and SMEs in those countries.

Because the commercial banks' attitudes toward SME financing are different from each other, it needs to investigate the different types of measures. Therefore, the survey explored the measures to make SME market more attractive for the commercial banks in Kenya, where the financial institutions shows relatively positive interest in SME finance, while it examined the measures including collaboration with governmental financial institutions to lower the cost of SME loans in Ghana where the financial institutions are reluctant to risk their customers' deposit by financing SMEs.

5.1 Ghana

Due to the survey's prerequisite of delivering solutions in the forms of JICA's technical assistance or pilot project based on its findings, the survey concluded that the utilization of risk money such as governmental financial institutions is one of the feasible solutions to enhance SMEs' access to finance especially in the short term in Ghana.

During the on-site survey, a number of financial institutions pointed out that there are critical challenges in the aspect of legal system and social infrastructure including low reliability of information provided by the credit reference bureau, the immature National ID system, and absence of the credit guarantee facility. However, the survey team did not select any measurement which intends to transform the existing social system or infrastructure for example by establishing a credit guarantee system as the theme of the project proposal based on the survey, because this type of measurement requires project design that are beyond the framework of technical assistance project due to the financial expense and human resources cost the government of the counterpart country has to cover.

Therefore, it is important to note that the fundamental solutions such as refinement of information provided by CRB, establishment of credit guarantee system, and reduction of NPL in the market would play significant role in improving SMEs' access to finance in Ghana in the long term.

5.2 Kenya

The survey contributed mainly to raise the proposal of the technical assistance projects targeting the local commercial banks which show relatively strong interest in financing local SMEs to boost SME loans in Kenya. Meanwhile, JICA has supported the growth of small and medium-sized enterprises in Sub-Saharan Africa by contributing to the impact investment fund as well as micro-finance institution in Pakistan through its Private-Sector Investment Finance (PSIF) scheme which has been resumed in 2011. Moreover, while many of the local financial institutions and associations demanded direct financial assistance to support their attempt to reinforce interest replenishment or to set up credit guarantee fund, it needs the further investigation to grasp the needs of investment and the expected impact contributing to improvement of access to finance in Kenya. By examining

1) the final beneficiaries, 2) that target of the investment or loan, and 3) the impact the financial injection could cause, this sections indicates that it is essential to identify the objective and the target of the financial assistance and to perform a thorough due diligence on the target institutions.

Firstly, it is essential to clearly identify the final beneficiary of whom it intends to improve the access to finance, because the financial needs at enterprises vary depending on the types of business and its stage of company's life cycle. For example, the type of credit that micro and mall enterprises usually need is typically an unsecured short-term loan which accounts from 100 to 500 USD to supplement their working capital. In October 2019, several commercial banks in Kenya co-founded a small loan platform called "stawi" to respond to such credit needs. On the other hand, medium size enterprises usually have financial demand of mid- or long-term secured loan to expand their asset/ facility to grow their business. However, the local commercial banks remain to hesitate to offer mid- or long-term credit to SMEs due to their concern about the default risk. In response to the situation, the Kenyan government has been considering to introduce credit guarantee system which is to complement the risk appetite of the local commercial banks. These examples show that the importance of identifying final beneficiaries before selecting investment target and grasping their financial needs, because factors like loan amount, loan period, purpose of the loan, and credit risk contain vary considerably depending on the status of borrowers/ final beneficiaries.

Secondly, to maximize impact of PSIF in improving access to finance, it is crucial to set the investment target appropriately. For example, while MFIs mention organizing data, refining their assessment standard, and developing efficient scoring model in response to implementation of IFRS9 as their main challenges during the interviews, the giant local banks indicate that registration of collateral and operation cost that KYC process takes as major challenges they face. It shows that the business challenges and its cause diverse depending upon the financial institutions, therefore it is important to recognize the problems on value chain of the target financial services so that the investment directly contributes to tackle those business challenges.

Thirdly, it needs to investigate the target institutions' value and risks to estimate the impact of the investment. The items to be examined include business model, regulation and its affect to the business to name a few. For example, the business models of Kenyan commercial banks are classified into three models; 1) Corporate oriented, 2) Supply-chain oriented, 3) Micro-oriented. Among those three types of business models, 2) and 3) cover SMEs as their clients, but the strategy on how they acquire new clients at SME market differs to each other which means that the groups and types of companies by investment are depending on each financial institutions' business models (Table 5.2.1). As a result, since various factors such as business model and risk of the target companies affect the outcome of the investment, a comprehensive and in-depth research on the target companies and its business environment plays significant role in selecting target institutions of the investment.

In conclusion, clarification of project objective and through investigation on target institution is essential when considering to direct financial assistance such as SPIF at JICA to improve access to finance since beneficiaries' needs and anticipated impact differs depending on the purpose and the target of investment deal.

		1) Corporate oriented	2) Supply-chain oriented	3) Micro-oriented
Information used in credit appraisal		Hard information on business	Combination of hard and soft information on the business and entrepreneur, and information on government and corporate clients in supply chain of SME	Soft information on the entrepreneur and the business
Products and services offered	Typology	Scaled down version of products offered to corporates	Specialized SME financing products	Scaled up versions of retail or microfinance products
	Examples	Asset finance, working capital finance, FX, wealth management	Invoice discounting, hire purchase, leasing, overdrafts	Working capital loans, overdrafts, asset finance, FX
Approach to customer acquisition		Brand recognition	Networks of corporate customers	Large outreach networks encourage graduation from micro to the SME space
Depth of target market		Medium and Large enterprises	Small and medium enterprises	Micro, small and medium enterprises
The number of branches		Limited within big cities	Limited within specific region and counties	Vast number of branches spread to the wide range of regions
Challenges		− The branch network is limited and has less connection with SMEs. − Development of crediting SMEs whose financial statements has lower reliability	Difficult to expand their customer base due to the limited channels to approach new customers	High cost structure due to the number of branches and employees as well as inadequate capacity of employees
Type of bank		Large multinationals	Small and mid-sized banks of local and sometimes regional origin	Large and medium-sized local banks

Reference） **[FSD Kenya, 2015]**

Table 5.2.2 Overview of business models of Kenyan commercial banks

Chapter 6 Appendix

Appendix1. Long list of means to improve access to finance in Africa

Chapter 7 Reference

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以上

Appendix1. Measures to Improve Financial Access in Africa (Long List)

#	Category	Building block (Level1 / Level2 / Level3 / Level4 / Level 5)	Screening	Financial Institutions (Lenders): Challenges	Financial Institutions (Lenders): Direction of resolution	SME(borrower): Challenges	SME(borrower): Direction of resolution	Infrastructure (government/third-party organizations, etc.): Challenges	Infrastructure (government/third-party organizations, etc.): Direction of resolution
1	(1) Interest rates raised	1 Deposit interest rate: Since the element overlaps with "market interest rate", it is omitted.	excluded because it overlaps with the element of market interest rates	-	-	-	-	-	-
2		2 Market interest rate	Components are excluded by the following screening	-	-	-	-	-	-
3		1 Inflation rate	Components are excluded by the following screening	-	-	-	-	-	-
4		1 Country Risk (Country Creditworthiness)	Components are excluded by the following screening	-	-	-	-	-	-
5		1 Economic power of the country	The theme is excluded for domestic financial access	-	-	-	-	-	-
6		2 the robustness of the national system	The theme is excluded for domestic financial access	-	-	-	-	-	-
7		3 Sensitivity to national event risk	The theme is excluded for domestic financial access	-	-	-	-	-	-
8		2 Credit status	Components are excluded by the following screening	-	-	-	-	-	-
9		1 Credit levels in the private sector	Excluded because it does not theme individual sectors	-	-	-	-	-	-
10		2 Private sector credit expansion	Excluded because it does not theme individual sectors	-	-	-	-	-	-
11		2 Creditworthiness of Financial Institutions	Components are excluded by the following screening	-	-	-	-	-	-
12		1 Macro environment	Components are excluded by the following screening	-	-	-	-	-	-
13		1 Country risk (national creditworthiness)	The theme is excluded for domestic financial access	-	-	-	-	-	-
14		2 Credit situation: Same as the factor of inflation	Excluded because it does not theme individual sectors	-	-	-	-	-	-
15		3 Industry structure	The entire industry structure is excluded because it is not a theme	-	-	-	-	-	-
16		2 Financial position	Components are excluded by the following screening	-	-	-	-	-	-
17		1 Solvency	Components are excluded by the following screening	-	-	-	-	-	-
18		1 Asset risk (ratio of problem receivables)	3Credit costs are considered for problem receivables	-	-	-	-	-	-
19		2 Equity (Shareholders' Equity)/Risk Assets)	Shareholders' equity is a direct market theme, risk assets are considered at (3)	-	-	-	-	-	-
20		3 Profitability (net income)/tangible assets)	Profitability is considered at (2) operational costs	-	-	-	-	-	-
21		2 Liquidity	Components are excluded by the following screening	-	-	-	-	-	-
22		1 Funding structure (market funds)/Tangible Bank Assets)	interbank markets and central banks.BsExcluded for the theme of	-	-	-	-	-	-
23		2 Liquidity reserves (bank assets with liquidity)/Tangible Bank Asset	Liquidity reserves are excluded for different themes for each bank's portfolio	-	-	-	-	-	-
24		3 Non-financial status (qualitative evaluation)	Components are excluded by the following screening	-	-	-	-	-	-
25		1 Business variance	Business-related activities are considered in (2) operation costs	-	-	-	-	-	-
26		2 Opacity and complexity	Financial institution exposure is excluded because it differs in each row's situation	-	-	-	-	-	-
27		3 Behavioral characteristics	Behavioral characteristics are excluded because they are different for each line	-	-	-	-	-	-
28	(2) Operating costs	1 Strategy	-	tends to invest in government bonds in their own countries, which are relatively safe	(3) Considering credit costs	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	We have not designed a system (regulation) that encourages financial	Introduction of financial regulations based on cases of other countries (e.g., interest rate CAP, etc.)
29		2 Organization	-	Poor corporate governance/ inadhering organizational operations such as integration of financial institutions	Support for organizational structure transformation by referring to the organizational structure that serves as a benchmark for other countries	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	We have not designed a system (regulation) that allows financial	Introduction of financial regulations based on cases of other countries (e.g., capital regulation)
30		3 Business (loan-related)	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	-	-
31		1 Sales/Research	-	The know-how of the enterprise investigation has not been established.	Provision of corporate research methods based on methods from other countries	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Few companies are responsible for sector and corporate research/ lack of	Support for existing research companies/Support for establishing research companies
32		2 Reception	-	Reception work is paper-based and inefficient	Establishment of standardized reception forms (app support)/system construction support, etc.)	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
33		3 Review	-	The screening method is not standardized, and the quality of the examination is uneven	SMESupport for the establishment of screening methods in view of individual situations	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
34		4 Contracts and settlements	-	Contracting is paper-based and inefficient	Support for the construction of a written writing system for contract sands, etc.	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
35		5 Recovery	-	The classification of in-house correspondence and servicer correspondence is ambiguous	Establish collection criteria/Support for the construction of know-how for collection methods	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Few companies (servicers) responsible for collection/low servicer skills	Support for existing servicers and new entrants
36		4 Institutions and Rules (Loan-related)	-	Variations in loan settlement standards and pricing standards for lending rates are unclear Human resource development system is not in place	Clarification of common standards to be used as a reference for loan settlements and pricing Support for the introduction of a system based on a personnel system that serves as a benchmark for other countries	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
37		5 Human resources and skills (loan-related)	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
38		1 Sales/Research	-	Lack of industry research skills or lack of sales capabilities for customers	Support for improving industry research skills and support for improving consulting capabilities for loan officers (Training, etc.)	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
39		2 Reception	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
40		3 Review	-	Lack of screening skills	Support for improving screening skills for loan and examiners (training, etc.)	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
41		4 Contracts and settlements	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
42		5 Recovery	-	Poor customer management skills/ few people with that skill	Support for improving loan destination management skills (training, etc.)	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
43		6 Corporate culture	-	SMEnot trying to develop the connoisseurship of individual companies with a focus on the sector	Support for organizational change based on the corporate culture that serves as a benchmark for other countries	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions
44		7 System infrastructure (loan-related)	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	-	-
45		1 Sales/Research	-	Insufficient accumulation of sector information and company information / No system has been established for information accumulation or sales	Support for information accumulation by specific sector Support for sales support system development	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Information on external credit information agencies is fragile	Support for the development and revitalization of credit information agencies
46		2 Reception	-	The reception system has not been established and has fallen into a manual center.	Standardization support for loan application acceptance forms Support for the development of schemes (APIs) that link financial institutions with information necessary for corporate	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
47		3 Review	-	The screening system has not been established (many human judgments)	Support for the development of screening systems including scoring	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
48		4 Contracts and settlements	-	The system for creating the contract has not been established or has only some functions.	Support for the development of loan-related contracts and settlement-related systems	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
49		5 Recovery	-	Vulnerable system functions due to recovery concerns (no alerts, etc.)	Support for the development of loan-related contracts and settlement-related systems	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
50	(3) Credit cost	1 LGD(Loss Given Default: Loss (rate) assumed if the debtor defaults	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	-	-
51		1 Amount of receivables	-	The amount of the claim itself is not controllable.	The amount of the claim itself is not controllable.	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Poor sector PD, leading to financial institutions' reluctance to lend	Support for the supply of risk money by players other than financial institutions (public institutions, investment funds, etc.) Support for the development of institutional loans such as founder's loans
52		2 Uncollectable amount	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	-	-
53		1 Percentage of conservation to receivables	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	-	-
54		1 Collateral	-	The basis of collateral setting is vulnerable	Support for establishing an appropriate real estate evaluation system Support for establishing a loan system based on assets other than real estate (inventory, receivables, etc.) Support for the development of loan products that can be maintained in collateral settings (utilization of current assets (products, receivables), activation of silone, etc.)	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Assets that are collateral at the time of borrowing are required, and the hurdle to borrowing is high. The disposal environment for collateral assets is not in place.	Support for the establishment of a loan scheme that does not support collateral Support for market development for sale of collateral assets (real estate trading market, etc.)
55		2 Guarantee	-	The guarantee system is not being used well.	Support for the development of a credit guarantee system	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Credit guarantee system vulnerable	Support for the establishment and operation of a credit guarantee system
56		2 Recoverable rate in sector	-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	-	-
57		1 On-bee payment	-	The method of payment (real estate, goods) is vulnerable (absence of	Support for the activation of servicers (funding for establishment, provision of service-singing know-how, etc.)	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Difficulty in disposing of payments (real estate, goods)	Support for market development for asset sales (real estate trading market, etc.)
58		2 Seizure	-	Vulnerable seizure method (absence of servicer, etc.)	Support for the activation of servicers (funding for establishment, provision of service-singing know-how, etc.)	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Difficulty in disposing of seizure assets (real estate, goods, receivables, etc.)	Support for market development for asset sales (real estate trading market, etc.)
59		2 Pd(Probability of Default):1probability that the debtor defaults during the year	-	-	-	-	-	-	-
60		1 Credit information	-	-	-	-	-	-	-
61		1 Quantitative information	-	-	-	-	-	-	-
62		1 Financial data	-	Not enough financial data has been collected	Support for the development of content for financial information that can be financed Support for application development that can accumulate debtor data (finance, transactions, etc.)	Financial data sufficient for loan judgment has not been developed/ there is no infrastructure in place for data development	Support for the development of financial information content necessary for loan decisions Support for financial data input & accumulation application development for submission to financial institutions	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions

#	Category	Building block Level1	Level2	Level3	Level4	Level 5	Screening	Financial Institutions (Lenders) Challenges	Financial Institutions (Lenders) Direction of resolution	SME(borrower) Challenges	SME(borrower) Direction of resolution	Infrastructure (government/third-party organizations, etc.) Challenges	Infrastructure (government/third-party organizations, etc.) Direction of resolution
63					2 Transaction data		-	Not enough transaction data is collected	Support for application development that can accumulate debtor data (finance, transactions, etc.)	We have not been able to accumulate our transaction information.	Support for application development that can accumulate transaction information	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
64					3 Others (industry information, etc.)		-	Not enough sector information has been collected	Support for application development that can accumulate debtor data (finance, transactions, etc.)	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions
65				2 Qualitative information			-	-	-	-	-	-	-
66					1 Business (including commercial flow)		-	Insufficient understanding of business	Support for the development of information and content of the business contents necessary for loan determination	Lack of skills to provide information to financial institutions regarding objective business strengths and weaknesses/ failure to operate business stably	Consultation for business analysis and business planning Consultation on business operations	We have not been able to create an environment in which SME can operate stably due to high inflation rates.	Implementation of measures that enable SME to operate stably (control of inflation rate, approach to foreign exchange stability, public investment control, sector individual support, etc.)
67					2 Business plan		-	Unable to collect reliable business plan data	Support for improving business planning support skills/ Support for system development to support the realization of business plans	Lack of skills to develop business plans over the medium to long term	Consultation for business analysis and business planning Consultation on business operations	We have not been able to create an environment in which SME can operate stably due to high inflation rates.	Implementation of measures that enable SME to operate stably (control of inflation rate, approach to foreign exchange stability, public investment control, sector individual support,
68					3 Management (including executives) information		-	Insufficient collection of human resources information, including managers	Support for the granularity of personnel information including management and the development of content necessary for loan decisions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions
69					4 Other Reputation Information		-	Insufficient collection of reputation information for target companies	Support for the granularity of reputation information and the development of content required for loan decisions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions	Not eligible for the theme of financial institutions
70			2 Scoring model				-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
71				1 Quantitative information			-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
72					1 Achievements by Sector By Default, etc.		-	Insufficient accumulation of default actual information	Feedback support for default information by NPL data analysis	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
73					2 Financial Institutions' Portfolio (Exposure)		-	Insufficient portfolio analysis based on data	Feedback support for exposure management through NPL data analysis	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
74				2 Qualitative information			-	-	-	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
75					1 Reputation information by sector		-	Insufficient sector-by-sector information gathering	Support for the development of information granularity and content that enable foreseeing the sector	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
76					2 Reputation information of the lender, etc.		-	Insufficient collection of reputation information for target companies	Support for the granularity of reputation information and the development of content required for loan decisions	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
77				3 Scoring logic			-	Poor model logic construction	Implementation of feedback to the scoring model by nPL generation meganism analysis Development of a scoring model across financial institutions	Not eligible for financial institution/infrastructure theme	Not eligible for financial institution/infrastructure theme	Similar to the issues of financial institutions	Similar to the direction of the resolution of financial institutions
78	(4) Capital cost	1 UI(Unexpected Loss)Var−EL					Components are excluded by the following screening	-	-	-	-	-	-
79			1 Var(Value at RiskThe maximum expected loss that management can tolerate				Excluded due to financial institution portfolio problems	-	-	-	-	-	-
80			2 EL(Expected LossAverage expected loss (3) synonymous with credit cost				EL(3) Credit cost	-	-	-	-	-	-
81		2 Capital procurement costs					Components are excluded by the following screening	-	-	-	-	-	-
82			1 Market interest rates : (1) Inclusion in the procurement interest rate				Market interest rates are considered at (1) procurement rates	-	-	-	-	-	-
83			2 Expected Rate of Return on Market Portfolio				Excluded for direct market themes	-	-	-	-	-	-
84			3 Sensitivity to market portfolio				Excluded for direct market themes	-	-	-	-	-	-
85	(5) Target Margin	1 Interest rates determined by financial institutions					Excluded for what is specified on each line	-	-	-	-	-	-