Developing an ASEAN Benchmark for SME Credit Rating Methodology

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ACRONYMS AND ABBREVIATIONS

ABM	Association of Banks in Malaysia
ABS	Association of Banks in Singapore
ADB	Asian Development Bank
AEC	ASEAN Economic Community
AHP	Analytical Hierarchy Process
AMBD	*Autoriti Monetari Brunei Darussalam*
AMBD-CB	*Autoriti Monetari Brunei Darussalam*-Credit Bureau
AMS	ASEAN Member States
ANN	Artificial Neural Networks
APBSD	ASEAN Policy Blueprint for SME Development
ASEAN	Association of Southeast Asian Nation
ASKRINDO	*Asuransi Kredit Indonesia*
B2B	Business-to-Business
BAP	Banks Association of the Philippines
BDF	Banque de France
BDS	Business Development Services
BI	Bank Indonesia
BMSMED-DTI	Bureau of Micro, Small, and Medium Enterprise Development – Department of Trade and Industry
BNM	Bank Negara Malaysia
BRI	Bank Rakyat Indonesia
BRR	Borrower Risk Rating
BSP	*Bangko Sentral ng Pilipinas*
CAM	Cambodia
CBC	Credit Bureau Cambodia
CBM	Credit Bureau of Malaysia
CBS	Credit Bureau Singapore
CCIC	Central Credit Center for Information
CCIS	Central Credit Information Services
CCRIS	Central Credit Reference Information System
CGC	Credit Guarantee Corporation
CGCMB	Credit Guarantee Corporation Malaysia Berhad
CHS	Campbell-Hilscher-Szilagy
CIMB	Commerce International Merchant Bankers
CIS	Credibility Index for SME
CISA	Credit Information System Act
CLMV	Cambodia-Lao PDR-Myanmar-Viet Nam
CMSA	Capital Markets and Services Act
CRA	Credit Rating Agency

CRD	Credit Risk Database
CRISIL	Credit Rating Information Services of India Limited
D&B	Dun & Bradstreet
DBP	Development Bank of the Philippines
DCHEQS	Dishonoured Cheques Information
DD	Distance to Default
DFID	Department for International Development
DOSMEP	Department of Small and Medium Enterprise Promotion
EBIT	Earnings before Interest and Taxes
EBITDA	Earnings before Interest, Taxes, Depreciation, and Amortization
ECAI	External Credit Assessment Institution
ECB	European Central Bank
EDC	Entrepreneurial Development Centre
ERIA	Economic Research Institute for ASEAN and East Asia
EU	European Union
ESCB	European System of Central Banks
FASMEC	Federation of Small and Medium Enterprises of Cambodia
FGD	Focus Group Discussion
FICO	Fair Isaac Corporation
GDP	Gross Domestic Product
GFSME	Guarantee Fund for Small and Medium Enterprise
GLC	Government Link Companies
GTZ	*Gesellschaft für Technische Zusammenarbeit*
HURI	Hachinohe University Research Institute
IADB	Inter-American Development Bank
ICCI	International Chambers of Commerce and Industry
ICICI	Industrial Credit and Investment Corporation of India
ICRA	India Credit Rating Agency
ICT	Information and Communication Technology
IDR	Indonesia Rupiah
IFC	International Finance Corporation
INR	Indian Rupee
INSEE	National Institute for Statistics and Economic Research
IPO	Initial Public Offering
IPRs	Intellectual Property Rights
JAIF	Japan ASEAN Integration Fund
JAMKRINDO	*Jaminan Kredit Indonesia*
JCR	Japan Credit Rating Agency
JFC	Japan Finance Corporation
KFC	Kentucky Fried Chicken
LAO	Lao PDR
LDB	Lao Development Bank

LLC	limited liability company
LPEM FEUI	*Lembaga Penyelidikan Ekonomi dan Masyarakat Fakultas Ekonomi Universitas Indonesia*
MDA	Multiple Discriminant Analysis
ME	Medium Enterprise
MFI	Microfinance Institutions
MICC	Ministry of Information, Communications, and Culture
MICRA	Microfinance Innovation Center for Resources and Alternatives
MIE	Micro Enterprise
MIME	Minister of Industry, Mines, and Energy
MIRA	Microfinance Institution Rating Agency
MMK	Myanmar Kyat
MMR	Myanmar
MNC	Multinational Corporation
MoF	Ministry of Finance
MRS	Manufacturing Related Services
MSIC	Malaysian Standard Industrial Classification
MSME	Micro, Small, and Medium Enterprises
NCB	National Credit Bureau
NIS	National Institute of Statistics
NFCGC	National Federation of Credit Guarantee Corporations
NPL	non-performing loan
NSIC	National Small Industries Corporation
OSMEP	Office of SME Promotion
OJK	*Otoritas Jasa Keuangan*
PBI	*Peraturan Bank Indonesia*
PCL	Public Company Limited
PD	Probability of Default
PDM	Probability Default Model
PDP	Personal Data Protection
PDR	People's Democratic Republic
PEFINDO	*Pemeringkat Efek Indonesia*
PHP	Philippine Peso
PM	Prime Minister
R&D	Research and Development
RA	Republic Act
RIA	Regulatory Impact Analysis
RM	Ringgit Malaysia
ROA	Return on Asset
RONW	Return on Net Worth
RWA	Risk Weighted Asset
S&P	Standard and Poor's

SAPASD	Strategic Action Plan for ASEAN SME Development
SB Corp	Small Business Corporation
SBGFC	Small Business Guarantee and Finance Corporation
SC	Securities Commission
SCORE	SME Competitiveness Rating for Enhancement
SE	Small Enterprise
SGD	Singapore Dollar
SIBDI	Small Industries Development Bank of India
SICRA	Singapore Credit Rating Agency
SID	*Sistem Informasi Debitur*
SME	Small and Medium Enterprises
SMEWG	Small and Medium Enterprises Agencies Working Group
SMED	Small and Medium Enterprise Development
SMERA	SME Rating Agency
SMIDEC	Small and Medium Industry Corporation
SPRING	Standards, Productivity, and Innovation Board
SSI	Small Scale Industry Unit
SSMM	*Suruhanjaya* Syarikat Malaysia
SWOT	Strength Weakness Opportunity Threat
TCG	Thailand Credit Guarantee
TRIS	Thai Rating and Information Services
UK	United Kingdom
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
US	United States
USA	United States of America
USD	United States dollar
UTI	Unit Trust of India
VNBA	Vietnam Banks Association
VNM	Vietnam
YEAB	Young Entrepreneurs Association Brunei

FOREWORDS FROM THE DEPUTY GOVERNOR OF BANK INDONESIA

ASEAN Economic Community that will be fully implemented at the end of 2015 aims to generate ASEAN community which is characterized by a single market and production base, a highly competitive economic region, a region of equitable economic development, and a region fully integrated with the global economy.

The purpose of "equitable economic development " among others is obtained through the development of Micro, Small and Medium Enterprises (MSME), which in practice refers to ASEAN Policy Blue Print for SME Development (APBSD) 2004-2014 through five programs, namely (i) human resource development and capacity building, (ii) enhancing SME marketing capabilities, (iii) access to financing, (iv) access to technology, and (v) creating conducive policy environment.

SME's strategic role as the backbone of the ASEAN economies indicates that the SME development is critical to attain national and regional equity and prosperity. However, the development of SME still faces problems among others is limited SME access to financing. One of the reasons is the asymmetric information between bank and SME about the creditworthiness of SME and the viability of their business plans. Due to the difficulties to obtain information that can be relied on regarding financial and business conditions of SME, banks are unable to minimize default risk on loans extended to SME which could lead to higher pricing of SME loans or smaller loan disbursement to SME.

In this regard, high quality information regarding SME creditworthiness is a necessary condition to optimize SME access to financing. One of the ways to provide such information is through the rating of SME provided by credible credit rating institutions. The rating is expected to reduce the information gap between banks and SME. In addition, the high quality information on SME creditworthiness through SME credit rating is expected to improve SME bargaining position in order to obtain more favorable credit terms as well as to assist a sound SME lending practice.

Moreover, awareness among ASEAN member states regarding the importance and the benefit of SME credit rating for increasing SME access to financing needs to be increased. These are some reasons why Indonesia has taken the initiative to carry out the project "Developing an ASEAN Benchmark for SME Credit Rating Methodology". This project is completed with the funding support from Japan-

ASEAN Integration Fund (JAIF), the support from and cooperation of ASEAN SME Working Group and ASEAN Secretariat. I hope that the report can serve as a reference for the issues regarding SME access to financing and SME credit rating.

Halim Alamsyah

Deputy Governor of Bank Indonesia

FOREWORDS FROM ASEAN SMEWG CHAIRMAN (2014-2015)

ASEAN will emerge and present itself as a stronger community on the global stage with the formation of the ASEAN Economic Community (AEC). With 31st December 2015 fast-approaching, governments in the region are working hard to ensure the realization of the AEC.

The fact that Small and Medium Enterprises (SMEs) account for more than 96 per cent of all enterprises in ASEAN shows their significance as the engine of growth in the region. However, it has been observed that a limiting factor of SMEs' growth is the lack of access to financing.

Being cognizant of this, the ASEAN SME Working Group (SMEWG) launched an initiative to ***develop an ASEAN Benchmark for SME Credit Rating Methodology.*** This initiative was supported by the Japan-ASEAN Integration Fund (JAIF), and aims to reduce asymmetric credit information between lenders and borrowers. Relevant stakeholders from central banks, credit rating agencies, SME development agencies, and commercial banks from around the region were consulted through this initiative.

The publication of this study is timely as the ASEAN SMEWG gears up for a post-2015 plan for SME development. Increasing access to financing remains an important pillar of the ASEAN SMEWG's work, and the findings within will provide useful insights. Led by Bank Indonesia, in partnership with the Institute for Economic and Social Research, University of Indonesia (LPEM FEUI), this initiative proposes guiding principles, infrastructure required, and the baseline criteria necessary for an SME credit rating methodology. To provide a holistic perspective, implementation challenges of a SME credit rating system, such as the availability and integrity of information, and acceptance of the score by lenders have been included.

I am heartened by this initiative as it is a positive step towards increasing access to financing for ASEAN SMEs. I look forward to more of such initiatives to support the development of SMEs in the region.

Ted Tan

Chairperson of ASEAN SME Agencies Working Group (SMEWG), 2014 - 2015

Deputy Chief Executive, SPRING Singapore

CHAPTER 1: INTRODUCTION

1.1. Background

SME dominates the social and economic development in ASEAN member economies. On average, they account for more than 96% of all firm establishments, take in about 50% - 85% of domestic employment, and contribute to gross domestic product (GDP) for about 30% - 53% and to exports between 19% and 31%.

Unfortunately, the development of SME in these countries is often impeded by many factors. Among other factors, limited access to finance from financial institutions is the critical one. Access to finance is often defined as ability to acquire external financial sources from formal financial institutions for its business purposes. SME often needs additional financing sources to expand their businesses or even to survive in the industry. Aside from their internal source, banks are one of important external financial sources.

In conjunction with that, studies produced by HURI, Japan (2009) reveals that domestic financing landscape in most of ASEAN countries is mostly (60% – 70%) dominated by bank's related financing rather than any other types of financing.

Ironically, most banks are unwilling and hesitant to provide credit to SME. Among other reasons, problem of asymmetric information is the one often raised by banks. In most cases, they are lacking information about SME's credit history, business plan, financial capacity, management capabilities as well as their collateral. Such a problem leads to a perception that SME is a high credit risk business.

Such perception is reflected from the data of bank loans uptake by SME in these countries. Although vary across countries, in general, the proportion is less than 50% of total bank lending in each countries. Not unimportantly, data on Non-Performing Loan (NPL) suggests that SME NPL constitutes a large portion of gross NPL in each economy (ADB SME Finance Monitor 2013).

For that reasons, to help better understand the risk profile of SME, to better the (credit) target, to speed up (credit) disbursement process, and to expand (credit) service for SME, banks need supporting information about creditworthiness of SME borrower to bridge the information gap. Credit rating/scoring helps to provide such information.

1.2. Research Gap

Considering this background, there is a need to establish credit rating/scoring system especially for SME in ASEAN member states (AMS), as a mean to address the problem of asymmetric information and in turn to overcome the problems of limited access to finance.

However, some of AMS have already established such system, though not all are specifically designed for SME. Moreover, considering variations in SME characteristics and its landscape, and institutional settings in these countries, and to possibly further advance the financial sources for SME development in the region, there is also a need to develop a benchmark for SME credit rating methodology for AMS. The benchmark should cover at least minimum standard for rating methodology to create objectivity and transparency for all stakeholders.

1.3. Research Objective and Scope of Work

Therefore, this study aims:

1. To develop an ASEAN benchmark for SME credit rating methodology. Not only it will construct a minimum standard quantitative model for rating, but it also covers some guidance on SME eligibility criteria to be rated.
2. To build awareness on the benefit of credit rating system in AMS.
3. To provide some recommendations for its implementation, among others including regulation aspect, institutional aspect, financing aspect, business process, and incentives system for banks and SME to use credit rating especially for countries which do not have and applied the system yet.

1.4. Methodology

In an attempt to achieve the above objectives, the following activities have been performed:

1. Desk study/literature review of credit rating system in 3 non AMS. The selected countries are Japan, France and India[1].
2. In-depth interview to relevant stakeholders in 3 AMS (Malaysia, Thailand and Philippines)[2].
3. Survey to relevant stakeholders in the remaining AMS.
4. Focus Group Discussion (FGD) for Indonesian relevant stakeholders.
5. Dissemination through an international workshop in Indonesia inviting relevant stakeholders from AMS and international expert from Japan.

While task 1–3 are designed to explore the existing condition in each country and to develop the minimum standard methodology, task 4 and 5 are intended for building awareness of the benefit of such system.

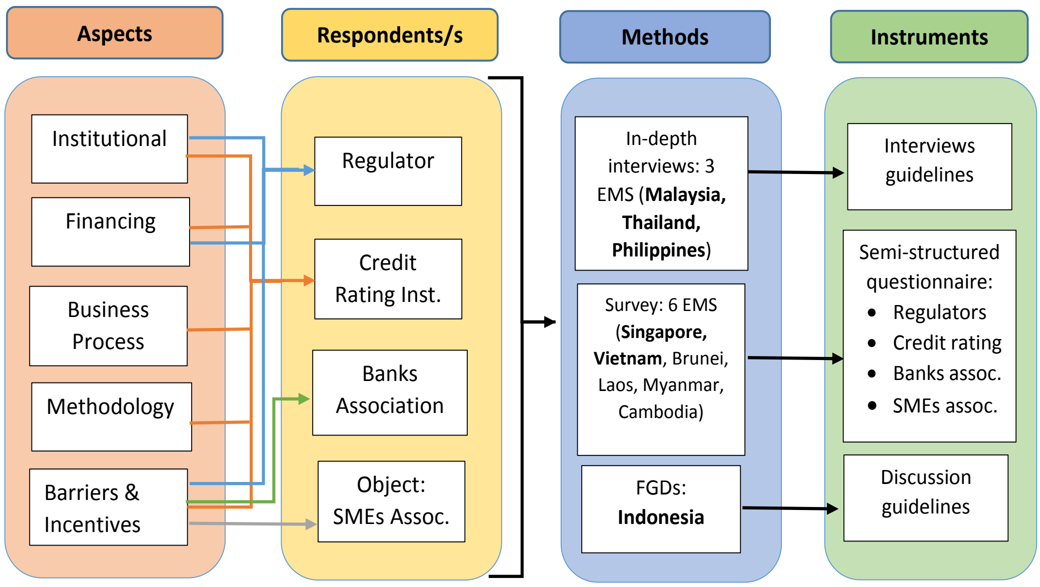
The relevant respondents for the interview, survey and FGD may include: (a) Regulator of credit rating (e.g. Central Bank and/or Financial Service Authority); (b) Actor (Credit Rating Agency – if any); (c) User of credit rating/scoring (Bank's association); and (d) Object/target of credit rating – SME (Ministry of SME or SME association). The detailed list of the respondents can be found in the **Appendix 1** (as supplement of the main report).

Particular aspects to be observed and asked from these respondents covers: (i) Institutional aspects (e.g. which, how many, ownership, role of government; (ii) Financing aspects (e.g. funding, rating fee); (iii) Business Process (e.g. flow of work, initiative, protocol for data collection and storage); (iv) Rating Methodology (e.g. model construction, rating scale, weight, qualitative issues) ; and (v) Barriers and Incentives to use rating (for banks and SME). The interview guidelines and the questionnaires are in the **Appendix 2**.

The framework for qualitative methodologies (in-depth interview, survey and FGD) is summarized in diagram below.

[1] The selected countries are determined based on discussion with Bank Indonesia
[2] Op cit.

Figure 1.1. Framework for Qualitative Methodologies



Apart of qualitative methods described above, the study attempts to construct a minimum standard quantitative rating model that can be applied in AMS economies. For that, the study applies descriptive and comparative analyses, and will also employ some simple quantitative index computation (if required).

1.5. Structure of Final Report

The following is the structure of Final Report:

CHAPTER 1 INTRODUCTION

CHAPTER 2 SMALL AND MEDIUM ENTERPRISES IN ASEAN

CHAPTER 3 THE IMPORTANCE OF CREDIT RATING SYSTEM FOR SME

CHAPTER 4 SME CREDIT RATING INFORMATION INFRASTRUCTURE-CASE STUDIES IN THREE NON ASEAN COUNTRIES

CHAPTER 5 SME CREDIT RATING INFRASTRUCTURE IN ASEAN

CHAPTER 6 GUIDING PRINCIPLES FOR SME CREDIT RATING IN ASEAN

CHAPTER 7 CONCLUSION AND RECOMMENDATION

CHAPTER 2: SMALL AND MEDIUM ENTERPRISES IN ASEAN

SME plays an important role in ASEAN economic integration because 89% - 99% of the firms in AMS are SME. Together, they create 52% - 97% of employment, and contribute 23% - 58% to the GDP, and 10% - 30% in total exports (Table 2.1). SME in ASEAN has important roles in providing opportunities for entrepreneurship and innovation as well as contributing to poverty alleviation in the region.

Table 2.1. Significance of SME in the Economy in Selected Years

Country	Share of Total Establishments		Share of Total Employment		Share of GDP		Share of Total Exports	
	Share	Year	Share	Year	Share	Year	Share	Year
Brunei Darussalam	98.20%	2010	58.00%	2008	23.00%	2008	-	-
Cambodia	99.80%	2011	72.90%	2011	-	-	-	-
Indonesia	99.90%	2011	97.20%	2011	58%	2011	16.40%	2011
Lao PDR	99.9%*	2006	81.40%	2006	-	-	-	-
Malaysia	97.30%	2011	57.40%	2012	32.70%	2012	19.00%	2010
Myanmar	88.8%**	-	-	-	-	-	-	-
Philippines	99.60%	2011	61.00%	2011	36.00%	2006	10.00%	2010
Singapore	99.40%	2012	68.00%	2012	45.00%	2012	-	-
Thailand	99.80%	2012	76.70%	2011	37.00%	2011	29.90%	2011
Viet Nam	97.50%	2011	51.70%	2011	-	-	-	-

Note: * Asian Development Bank (2013), ** Registered Numbers
Source: ASEAN SME Policy Index, ERIA (2014)

SME plays a vital role in ASEAN Economy, acting as vehicles to generate and restore growth in their own country and the region, provided that they are prepared to enter the potential market either within ASEAN or globally. SME development in ASEAN is embedded in the third pillar of the AEC Blueprint, namely, equitable economic development, and its development would directly contribute towards achieving the implementation of the third pillar. SME in the region, however, are reported to have difficulties in access to finance, technology, and markets.

The strengthening of ASEAN SME requires improvement of human resources, provision of access to finance, technology and innovation, and market as well as internationalization through policy support measures, supplementary activities and appropriate communication. In particular, providing access to finance for start-up SME is important for strengthening the SME development in ASEAN.

The AEC Blueprint has focused on SME development through the APBSD 2004-2014. It is expected that by 2015, ASEAN SME would form a major part of the regional and global supply chains. The Strategic Action Plan for ASEAN SME Development (SAPASD) 2010-2015 has been devised to engage the businesses on issues of access to finance, technology development, and human resources development, among others, in order to enhance the resiliency and competitiveness of SME. The post 2015 AEC needs to define a clear strategy for involvement of the private sector, especially SME, to achieve an inclusive economic growth in the region. One aspect would be explored in this study related with access to finance issues especially for the availability of SME credit rating.

2.1. SME in ASEAN: General Condition Represented by ASEAN SME Policy Index

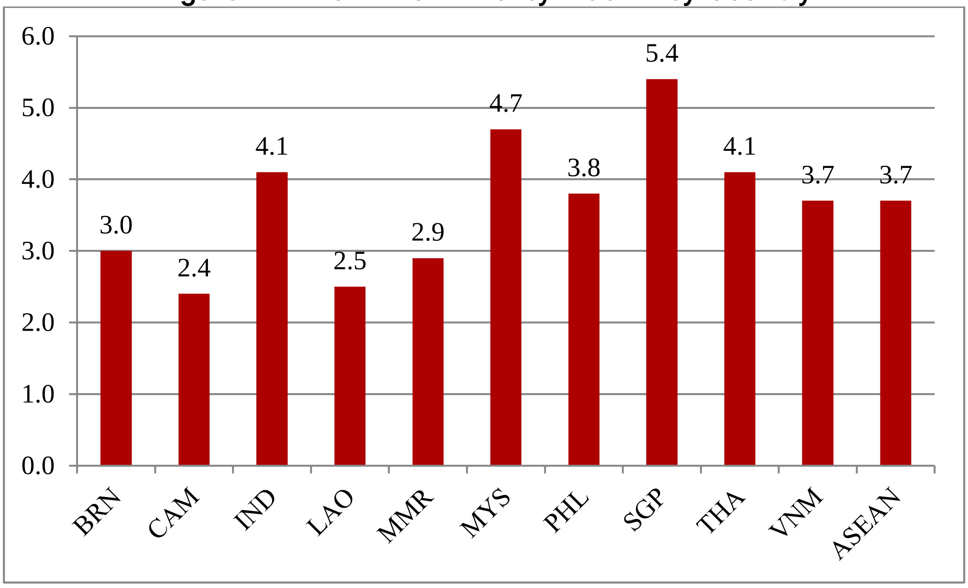
To give background for the analysis of SME credit rating in ASEAN, description of SME current condition in ASEAN is presented here. The description about SME condition in ASEAN is referred to ERIA study about SME Policy Index published in 2014.

The following is a list of eight policy dimensions of the ASEAN Policy Index based on the ASEAN SME Blueprint, the Strategic Plan, and the OECD: (1) Institutional framework, (2) Access to support services, (3) Cheaper and faster start-up and better legislation and regulation for SME, (4) Access to finance, (5) Technology and technology transfer, (6) International market expansion, (7) Promotion of entrepreneurial education, (8) More effective representation of SME's interest.

The result from the Policy Index suggest uneven levels of performance in the implementation of SME development policy at the national level between the two traditional groups of the AMS, namely, (a) the less developed members or the CLMV countries – Cambodia, Lao PDR, Myanmar, and Vietnam, and (b) the more advanced members or the ASEAN-6 which include Brunei Darussalam, which has a relatively lower score in comparison with Viet Nam (Figure 2.1).

Higher index scores reflect better performances and practices. On average, Singapore, Malaysia, Indonesia, Thailand, and the Philippines are in the top order of the index score, above the ASEAN average, followed by Viet Nam, Brunei Darussalam, Myanmar, Lao PDR, and Cambodia, whose aggregate index scores are below the ASEAN average.

Figure 2.1. ASEAN SME Policy Index – by Country



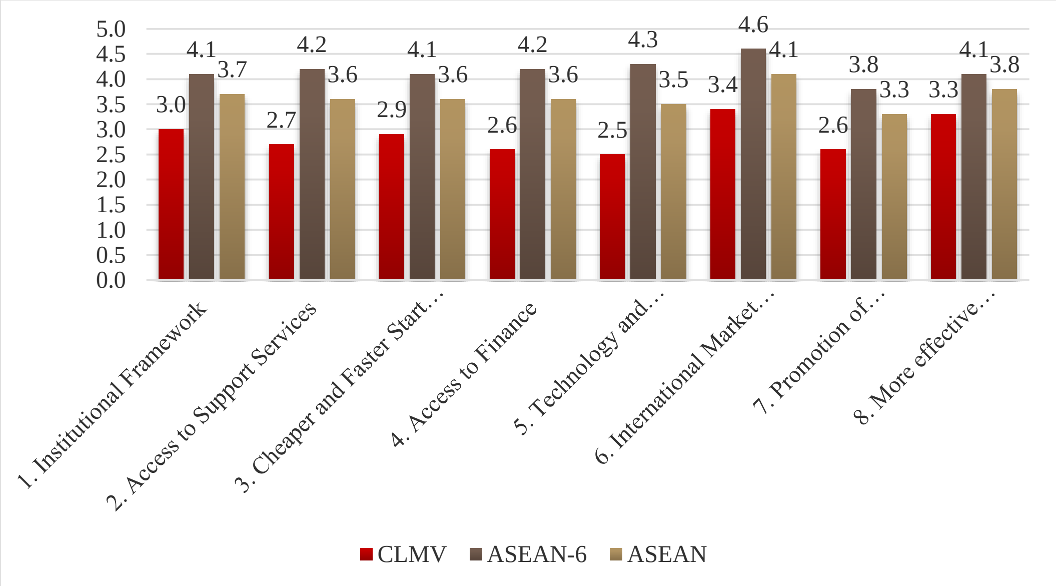
Source: ERIA (2014)

Figure 2.1 describes details on the component of SME index. Figure 2.1 shows that across the eight policy dimensions, there are big gaps between the ASEAN average, ASEAN-6 and the CLMV countries, with the most significant gaps and low regional standing found in five policy dimensions, namely: (1) technology and technology transfer, (2) access to finance, (3) access to support services, (4) promotion of entrepreneurial education, and (5) cheaper and faster start-up and better regulations.

Underlying gaps of performance among the AMS in these key policy dimensions are status of legal frameworks and institutional arrangements as well as elaboration and implementation of specific policy measures in each AMS.

The biggest gap in policy, i.e., to promote technology and technology transfer, is due to the lack of strategic approach to innovation policy for SME, poor provision of information on innovation support services, limited access to standard certification services, lack of technology support in universities, and little linkage between SME and R&D labs and incubators. Poor protection and promotion of intellectual property rights (IPRs), lack of broadband infrastructure, underdeveloped science/industrial parks, lack of competitive clusters, and insufficient financial incentives in technology development and R&D activities are also reasons for the gap.

Figure 2.2. ASEAN SME Policy Index – by Group of Countries and Policy Dimension



Source: ERIA (2014)

The gap in access to finance is exacerbated by the poor functioning of the cadastre system, stringent collateral requirements, and inadequate protection of creditor rights. Credit risk guarantee schemes and a central bureau for credit information, which are essential to promote collateral-free finance, are not well established and well-functioning. There is also a lack of a legal framework/policy to promote alternative finances and diversified financial markets, ranging from microfinance, leasing, factoring, venture capitals, equity funds, business angels, to stock markets.

Access to support services is severely hampered for SME in the CLMV countries due to the lack of action plan for the provision of support services, poor services of business development service centres (BDS), lack of legal framework for and underutilization of e-commerce and e-government services, and unreliable online portal for SME.

Promotion of entrepreneurial education exhibits both gaps between the two groups of AMS and a very low standing at the ASEAN level because most AMS have not clearly articulated an entrepreneurial promotion policy nor have integrated it into their national development plans with adequate budget, monitoring and evaluation system. Key competencies of entrepreneurship learning programs are not well introduced in the general and higher education system and there is lack of active collaboration with the private sector to develop curricula, research, customized training, coaching, internship, business awards and scholarship. Non-formal education in entrepreneurship and management of SME is also not well promoted.

There are also variations between AMS in the policy on making cheaper, easy start-up, and better legislation and regulations for SME. Procedures for business registration and overall process for SME for entry into operation are, in general, simpler, faster and cheaper in more advanced AMS than in the CLMV countries. Most of the ASEAN-6 can provide online existing and new legislations and regulations are routinely and systematically reviewed using the regulatory impact analysis (RIA) framework in these advanced AMS.

The gap in the capability to provide facilitating support for international market expansion is relatively wide between the two groups of AMS. It is because export promotion programs, provision of advice and high quality information are better structured in the ASEAN-6. They have also developed and run export capacity building programs nationwide in a well-coordinated manner. More financial facilities such as trade credits, grants, and insurance schemes are also in place in the ASEAN-6 to encourage SME to expand their market overseas, with a faster and cheaper custom clearance.

The overall development of institutional framework is not even among AMS. A common SME definition has been applied in relevant government agencies in the implementation of the SME development strategies in most of the ASEAN-6. In addition, these AMS have a multi-year SME development strategy which has been adopted by a single institution responsible for SME policy formulation and implemented by a designated executing agency with an effective coordinating role. Moreover, their mechanism for review, monitoring, and evaluation of the strategy is clearly in place, and programs/measures to facilitate the movement of SME from the informal to the formal sector are adopted.

The gap in promoting an effective representation of SME's interest is the smallest in the region due to the active role of industrial, business or SME associations in setting up structured consultation mechanisms with government agencies in policy formulation and advocacy process in order to represent SME's voice and interests domestically and internationally. However, most SME associations still lack resources, and technical and research capacities to provide high quality services and access to regional and global production networks.

2.2. SME Definition in ASEAN

There are several variations in definition of SME in ASEAN. Understanding different definition would be understood for SME analysis further in this study. The following table summarizes the different elements on SME definition in AMS. SME definition in each country could be seen as follow.

Table 2.2. SME in AMS at a Glance

Country/Economy	Employee[1)]	Capital	Fixed Assets	Sales	Production Capacity
Brunei Darussalam	99	–	–	–	–
Indonesia	100	–	+[2)]	+	–
Malaysia	150	–	–	+	–
Philippines	199	–	–	+	–
Singapore	199	–	+	–	–
Thailand	200	+	+	–	–
Vietnam	200	+	–	–	–
Myanmar	<200[4)]	+	-	-	+[3)]
Cambodia	<200	–	–	–	–
Lao PDR	99	–	+	–	–

Note: 1) Figures indicate the maximum number of employees in a firm defined as a MSME; 2) "+" as an element of the definition; 3) production value; 4) depends on sector.

Source: APEC (2003); except Myanmar, Cambodia, and Lao PDR: UNESCAP (2004)

Table 2.3. Definition of SME according to Tambunan (2008)*

Member Country	Employee	Annual Sales/Turnover	Fixed Assets	Invested Capital [a]
Brunei Darussalam[1]				
MIE	0-5			
SE	6-50			
ME	51-500			
Indonesia[2]				
a) All sectors				
- MIE	0-4			
- SE	5-19			
- ME	20-99	<USD 5M	<USD 1M	
b)				
- SE		<USD 100,000	<USD200,000	
- ME	100	USD 100,000-5M	USD100,000-1M	
Malaysia[3]				
MIE (Manufacturing & related services)	<5	<RM250,000		
SE - ,, -	5-50	RM250,000-<10M		
ME - ,, -	51-500	RM 10M-25M		
MIE (Service, incl. ICT, & primary agriculture)	<5	<RM200,000		
SE - ,, -	5-19	RM200,000-<1M		
ME - ,, -	20-50	RM1M-5M		
Philippines[5]				
MIE (Manufacturing)	<9		<3M	
SE - ,, -	10-99		above P3M-15M	
ME - ,, -	100-199		above P15M-100M	
Singapore				
SME (manufacturing and services)	199		<S$ 15M	
Thailand[4]				
-MIE (manufacturing)	<4			<500K Baht
-SE				
Manufacturing & services	<50		<50M Baht	<20M Baht
Trading : wholesaling	<25		<50M Baht	1-9M Baht
Trading : retailing	<15		<30M Baht	1-9M Baht
-ME				
Manufacturing & services	51-200		50-200M Baht	20-100M
Trading : wholesaling	26-50		50-100M Baht	1-9M
Trading : retailing	16-30		30-60M Baht	1-9M
Vietnam				
SE	<30			< D 1 Bill
ME	30-300			D1-10 Bill
Myanmar[6]				
SME	<200/100[e]	<10M Kyat[d]		<5M Kyat[c]
MIEs	<9[b]	<10M Kyat		<5M Kyat
Cambodia[6]				
SME	<200[f]			
Lao PDR[6]				
SME	5-99		1,200 M Kip	

Note : a) not including fixed assets; b) not limits for handicrafts; c) capital outlay; d) production value; e) depends on sector; f) industrial sector.

Source : 1) ASEAN-EU Partenariat '97 (http://acup.brel.com); 2) BPS= Central Bureau of Statistics and the State Ministry of Cooperative and SME; b); 3) SMIDEC (2006); 4) ACTETSME.ORG (website), except for MIE is from Allal (1991); Sibayan (2005); 6) UNESCAP (2004); others: APEC (2003), Hall (1995), and Harvie and Lee (2002a).
*Tambulan, Tulus. 2008. "Development of SME in ASEAN with Reference to Indonesia and Thailand". Chulalongkorn Journal of Economics 20 (1). April 2008: 53–83.

2.2.1. Indonesia

According to Indonesian Law No. 20 year 2008 about MSME, definition of MSME in Indonesia is categorized based on asset and sales revenue. Definition of MSME applied in the Regulation of Bank Indonesia (*Peraturan Bank Indonesia-PBI*) is the one stipulated in this Law. Based on the Law, definitions of MSME in Indonesia are as follows:

1. Micro Enterprise is a productive enterprise owned by individuals and/or the individual business entities that meet the criteria as defined in the micro enterprise, as provided in this Law.
2. Small Enterprise is a productive economic activities that stand alone, which is done by the individual or business entity that is not a subsidiary or branch company is not owned, controlled, or be part either directly or indirectly from a medium or large businesses that meet the criteria small enterprise referred to in this Law.
3. Medium Enterprise is a productive economic activities that stand alone, which is done by the individual or business entity that is not a subsidiary or branch company owned, controlled, or be part of either direct or indirect with Small or large businesses with total net assets or the annual sales revenue as provided in this Law.

Other than based on sales and revenue, there is also definition based on number of labour. Thus, the criteria of micro, small and medium enterprise in Indonesia can be summarized as follows.

Table 2.4. SME Criteria in Indonesia

No	Description	Criteria		
		Assets	Sales Revenue	Number of Labour
1	Micro	Max IDR 50 Million Max USD 4.160	Max IDR 300 Million Max USD 25.000	< 5
2	Small	> IDR 50 – 500 Million	> IDR 300 Million – 2.5 Billion	5 – 19

No	Description	Criteria		
		Assets	Sales Revenue	Number of Labour
		> USD 4.160 – 41.600	> USD 25.000 – 205.000	
3	Medium	> IDR 500 Million – 10 Billion > USD 41.600 – 830.000	> IDR 2.5 – 50 Billion > USD 205.000 – 4.160.000	20 – 99

Note: Equivalent in USD based on 1 USD = IDR 12,000,-

2.2.2. Malaysia

SMIDEC (Small and Medium Industry Development Corporation) has defined SME as follows. Basically, an SME is categorized based on its annual sales turnover or the number of full-time employees. Most Ministries share this definition.

Table 2.5. Sectors Classification in Malaysia

Manufacture	Services	Others
Referring to physical or chemical transformation of materials or components into new products.	Referring to all services including distributive trade; hotels and restaurants; business, professional and ICT services; private education and health; entertainment; financial intermediation; and manufacturing- related services such as research and development (R&D), logistics, warehouse, engineering etc.	Referring to the remaining three key economic activities, namely: i. Primary Agriculture: Perennial crops (e.g. rubber, oil palm, cocoa, pepper etc.) and cash crops (e.g. vegetables, fruits etc.), Livestock, Forestry & logging, Marine fishing, Aquaculture ii. Construction: Infrastructure, Residential & non-residential, Special trade. iii. Mining & quarrying: Classification of economic activities for purposes of definition will be based on the Malaysian Standard Industrial Classification (MSIC) 2008 codes as per Annex 1. This is to ensure comparability

Manufacture	Services	Others
		of data from various sources and to facilitate data harmonization across the various providers of SME statistics. However, the list of activities is not exhaustive and may be subject to amendments from time to time.

Table 2.6. Definition of SME in the Manufacturing Sector in Malaysia

Description	Sales Revenue	Number of Labor
Micro	RM 300.000 USD 100.000	Less than 5
Small	> RM 300.000 – RM 15 Million > USD 100.000 – USD 5 Million	5 – 75
Medium	> RM 15 – 50 Million > USD 5 Million – USD 16.6 Million	75 – 200

Note: Equivalent in USD based on 1 USD = 3 RM

Table 2.7. Definition of SME in the Service Industries and Other Sectors in Malaysia

Description	Sales Revenue	Number of Labor
Micro	RM 300.000 USD 100.000	Less than 5
Small	> RM 300.000 – RM 3 Million > USD 100.000 – USD 1 Million	5 – 50
Medium	> RM 3 – 20 Million > USD 1 Million – USD 6.6 Million	30 – 75

Note: Equivalent in USD based on 1 USD = 3 RM

Details of qualifying criteria in the definition of SME in Malaysia are:

- Sales turnover refers to total revenue including other incomes.
- Full-time employees include all paid workers working for at least 6 hours a day and 20 days a month; or at least 120 hours a month. Full-time workers also include foreign and contract workers. However, the definition excludes working proprietors, active business partners and unpaid family members or friends who are working in the business and do not receive regular wages.

2.2.3. Thailand

The Ministry of Industry through the Ministerial regulation issued in 2002 define three different categories of SME:

- Production Sector SME (includes agricultural processing, manufacturing, and mining).
- Service Sector SME.
- Trading Sector SME (includes wholesale and retail).

Table 2.8. Classification of Thai Enterprise

Industry	Small Enterprise	Medium Enterprise
Manufacturing	Enterprise which corresponds to any of the following; with **employees** of up to 50 or with **assets** of up to 50 million Baht. > USD 1.560.000	Enterprise which corresponds to any of the following; with 51-200 **employees** or with **assets** of no less than 50 million Baht and up to 200 million Baht. > USD 1.560.000 – USD 6.250.000
Wholesale	Enterprise which corresponds to any of the following; with **employees** of up to 25 or with **assets** of up to 50 million Baht. USD 1.560.000	Enterprise which corresponds to any of the following; with 26-200 **employees** or with **assets** of no less than 50 million Baht and up to 100 million Baht. > USD 1.560.000 – USD 3.125.000
Retailing	Enterprise which corresponds to any of the following; with **employees** of up to15 or with **assets** of up to 30 million Baht. USD 940.000	Enterprise which corresponds to any of the following; with 16-150 **employees** or with **assets** of no less than 30 million Baht and up to 60 million Baht. > USD 940.000 – USD 1.875.000
Service	Enterprise which corresponds to any of the following; with **employees** of up to 50 or with **assets** of up to 50 million Baht. USD 1.560.000	Enterprise which corresponds to any of the following; with 51-200 **employees** or with **assets** of no less than 50 million Baht and up to 200 million Baht. > USD 1.560.000 – 6.250.000

Note: Land cost is not included in assets; Equivalent in USD based on 1 USD = 32 THB

2.2.4. Vietnam

Definition

The Vietnamese government defines SME by Decree 56/2009/ND-CP as business establishments that have registered their business according to law and are divided into three levels: very small, small and medium according to the sizes of their total capital (equivalent to the total assets identified in an enterprise's accounting balance sheet) or the average annual number of labour (total capital is the priority criterion). The definition is as follows:

Table 2.9. SME Criteria in Vietnam

Industry	Micro Enterprise	Small Enterprise		Medium Enterprise	
	Number of Labour	Total Capital	Number of Labour	Total Capital	Number of Labour
Agriculture, Forestry, and Fishery	Max 10	Max VND 20 bio USD 940	10 - 200	VND 20 – 100 bio USD 940 – 4700	200 - 300
Industry and Construction	Max 10	Max VND 20 bio USD 940	10 - 200	VND 20 – 100 bio > USD 940 – 4700	200 - 300
Trade and Service	Max 10	Max VND 10 bio USD 470	10 - 50	VND 10 – 50 bio > USD 470 – 2.350	50 - 100

Note: Equivalent in USD based on 1 USD = VND 21.200

2.2.5. Philippines

Definition

Small and medium enterprises in Philippines are divided into three types, medium, small, and micro enterprises. They are determined based purely on the amount of their assets and number of employees, and also that there is a division to micro enterprises, below that of small enterprises. The features of Philippine definitions of small and medium enterprises are that there are no divisions according to type of industry such as manufacturing, retail, services etc., that irrespective of the type of company (personal, cooperative, partnership, corporation, etc.)

Table 2.10. SME Criteria in Philippines

No	Description	Criteria	
		Assets (in Peso)	Number of Labour
1	Micro Enterprise	Less than 3 Million Peso (67.000 USD)	1-9
2	Small Enterprise	3 – 15 Million Peso (67.000 USD – 335.000 USD)	10-99
3	Medium Enterprise	More than 15 Million and Less than 100 Million Peso (335.000 USD – 2.2 Million USD)	100-199

Note: Equivalent in USD based on 1 USD= 44.7 Philippine Peso

2.2.6. Singapore

<u>Definition</u>

According to the Standards, Productivity and Innovation Board (SPRING Singapore), definition of small and medium enterprises in Singapore is a company which has fixed productive assets (defined as net book value of factory building, machinery and equipment) not exceeding SGD15 Million (USD 11.7 Million) and employment size not exceeding 200 workers for non-manufacturing companies. (There is no official definition of SME. The above definition is made by the SPRING for the purpose of providing various development schemes to Singaporean SME.)

2.2.7. Brunei Darussalam

<u>Definition</u>

Under the Commonwealth Secretariat Final Report on Marketing Services for Brunei Darussalam Small and Medium Enterprises (SME) in March 2008, in the context of Brunei Darussalam, SME can be defined as micro, small, and medium enterprises. Micro enterprises are those businesses having 1 to 5 employees. Small enterprises are those businesses having 6 to 50 employees. Medium enterprises are those businesses having 51 to 100 employees.

Table 2.11. SME Criteria in Brunei Darussalam

No	Description	Criteria	
		%	Number of Labour
1	Micro Enterprise	43%	1-5
2	Small Enterprise	53%	6-50
3	Medium Enterprise	4%	51-100

From the studies conducted by the Brunei Institute of Technology and the Commonwealth Secretariat, Brunei SME are related to marketing, capital, government policies, human resources development, location, raw materials, and attitude of SME. Some of the challenges faced by SME in Brunei, such as: (1) Marketing; (2) Capital; (3) Human Resource; (4) Management Skills; (5) Raw Material; (6) Government Policies; (7) Location; and (8) Attitude. To deal with those challenges, the strategies of the government of Brunei Darussalam are: (1) Entrepreneurship Development Program, (2) Enterprise Development Program, (3) Financial Assistance Program, (4) Information Support Program, (5) Technology Development Programs, (6) Linkage Programs, (7) Incentive, and (8) Trade Promotion.

2.2.8. Cambodia

<u>Definition</u>

According to the SME Sub-Committee, as stated in the SME development framework, SME are defined based on the equivalent full-time employees. The definition of enterprise size is proposed to be applied to all industries. However, when employee number is not appropriate, the definition based on the size of total assets (excluding land) or a combination of the two should be used. Nevertheless, there is no formal definition of SME in terms of financial standing yet because different financial institutions often require different data. The Committee is part of a policy and strategy mechanism of the Royal Government of Cambodia for private sector development and chaired by the Minister of Industry, Mines and Energy (MIME).

Up to 2005 Cambodia did not have a single official classification of an SME. The National Institute of Statistics (NIS) classified enterprises with fewer than 10 employees as small, and 11 or more as large. It also, at times, further segregated enterprises with between 11 and 100 employees as medium sized. MIME defined small enterprises as those with fewer than 50 employees (which is included for Micro). More details will be reviewed in the table below.

Table 2.12. SME Criteria in Cambodia

No	Description	Criteria	
		Assets (in USD)	Number of Labour
1	Micro Enterprise	Less than 50,000 USD	Less than 10
2	Small Enterprise	50,000 - 250,000 USD	11 - 50
3	Medium Enterprise	250,000 - 500,000 USD	Over 100

SME in Cambodia are divided into three sectors by MIME as follows:

- Production sector including agricultural processing, manufacturing, and mining;
- Service sector;
- Trading sector including wholesales and retails.

2.2.9. Lao PDR

Definition

According to the Prime Minister's Office of Lao PDR (2004), SME are independent enterprises that are legally registered and operating according to the prevailing laws of the Laos and are classified into the following size categories:

- Small enterprises are those having an annual average number of employees not exceeding 19 people or total assets not exceeding two hundred and fifty million kip or an annual turnover not exceeding four hundred million kip.
- Medium sized enterprises are those having an annual average number of employees not exceeding 99 people or total assets not exceeding one billion two hundred million kip or an annual turnover not exceeding one billion kip.

Table 2.13. SME Criteria in Lao PDR

No	Description	Criteria		
		Assets (Million Kip)	Annual Turnover (Million Kip)	Number of Labor
1	Micro Enterprise	< 70 < 8.730 USD	< 100 < 12,470 USD	1-4
2	Small Enterprise	> 250 > 31,180 USD	> 400 > 49,800 USD	5 – 19
3	Medium Enterprise	> 1200 > 149,600 USD	> 2000 > 249,400 USD	20 – 99

Note: Equivalent in USD based on 1 USD = 8,000 Lao Kip

The Decree further classifies SME by sector or sub-sector as follows:

- SME operating in the production of goods.
- SME operating in the trade sector.
- SME operating in the service sector.

2.2.10. Myanmar

Definition

The official definition of SME in Myanmar since 1990 tends to focus on the industrial sector only. Four measures or criteria for classification, namely number of employees, capital investment, production volume and electrical usages are applied to distinguish different sizes of Myanmar private firms. No distinction in size is made for enterprises under the trade and service sectors or cottage and handicraft industries. According to the definition of SME defined by the Private Industrial Enterprise Law 1990, the definition of SME in Myanmar can be described as follow:

- Small scale industrial enterprises:

  Enterprise who has capital of MMK one million, or has a yearly production value of MMK 2.5 million. Uses electricity power from 3 Horse Power to 25 Horse Power and employs 1 to 50 workers.

- Medium scale industrial enterprises:

Enterprise who has capital between MMK 1 to 5 million, or has a yearly production value between MMK 2.5 to 10 million, or uses electricity power from 25 Horse Power to 50 Horse Power and employs 51 to100 workers.

Table 2.14. SME Criteria in Myanmar

No	Criteria	Description	
		Small Enterprise	Medium Enterprise
1	Power Used	3 to 25	26 to 50
2	Number of Labor	10 to 50	51 to 100
3	Capital	Up to 1 Kyat Million (< 1,000 USD)	Over 1 to 5 Kyat Million (1000 USD – 5,030 USD)
4	Production Value per Year	Up to 2.5 Kyat Million (< 2515 USD)	Over 2.5 to 10 Kyat Million (2515 USD – 9,940 USD)

Note: * 1 USD = 994 Kyat

2.3. SME Credit Condition in AMS

Typically, SME have difficulty in achieving the same level of efficiency in production and investment as large firm, which is often associated with disadvantages in their financial transaction. Information asymmetry is often quoted as critical factor in SME funding difficulties. A financial system with incomplete information triggers a condition in which financial institution hesitate to provide credit to SME because business risk and financial soundness cannot be adequately measured. Therefore, the enhancement of financial accessibility as well as understanding of SME risk profile is needed to strengthen the real sector especially for a country in which the SME contribution is big.

Under the bank-centered indirect financial systems established in most Asian countries, the demand side has little familiarity with direct finance. Naturally, SME seek access to banks as the primary, or only, instrument of formal finance (Shinozaki, 2012). This condition leaves SME management and operations vulnerable in the event of a credit crunch generated by unexpected events such as financial crisis. Again, this characteristic supports the need to understand risk profile of SME in more detail.

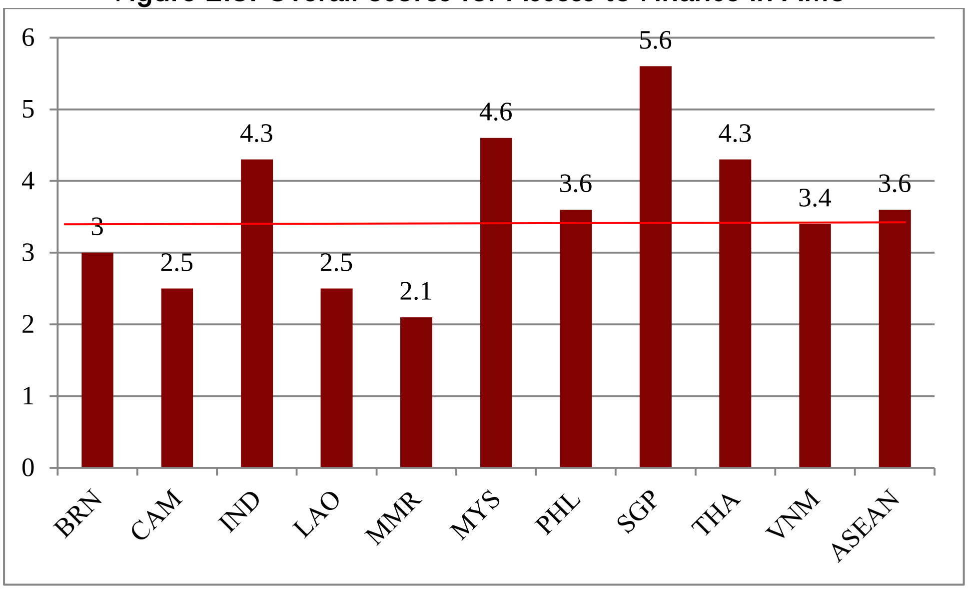
2.3.1. Access to Finance in ASEAN Countries

Based on ERIA Research (2014), a significant number of SME still rely on their internal resource for start-up and business expansion. However, for aspiring smaller and domestically owned companies in less developed economies (CLMV), such internal resources are scarce. In view of this, the availability of and access to external finance is very important.

On SME performance, financial access has a significant impact on SME innovation capability and participation in the export market. Larger SME which is able to access to larger loans with longer terms and at lower interest rates are more capable in conducting innovation and exporting activity in as much as these external finances with favourable conditions provide them with enough time and resources to innovate to enter foreign markets.

According to ERIA (2014), there is a big gap in the access to finance of the less advanced AMS as compared with Singapore, Malaysia, Thailand, Indonesia, and Philippines. SME Policy Index for Access to Finance is represented by the graph below.

Figure 2.3. Overall Scores for Access to Finance in AMS



Source: ERIA (2014)

From the graph above we could see that there are five countries below ASEAN average for access to finance, namely Myanmar, Lao PDR, Cambodia, Brunei, and Vietnam. Especially for Philippines, the score exactly the same with average score. The countries above average scores are Indonesia, Thailand, Malaysia, and Singapore. So we can conclude that SME access to finance is still become a problem in almost AMS except for Singapore that has highest score (5.6). This assessment based on several components such as legal and regulatory framework (land use right, collateral and provisioning requirement, creditor rights) and sound and diversified financial markets (credit guarantee schemes, credit bureau/registries, microfinance facilities, leasing, factoring, availability of risk capital, and access to stock market).

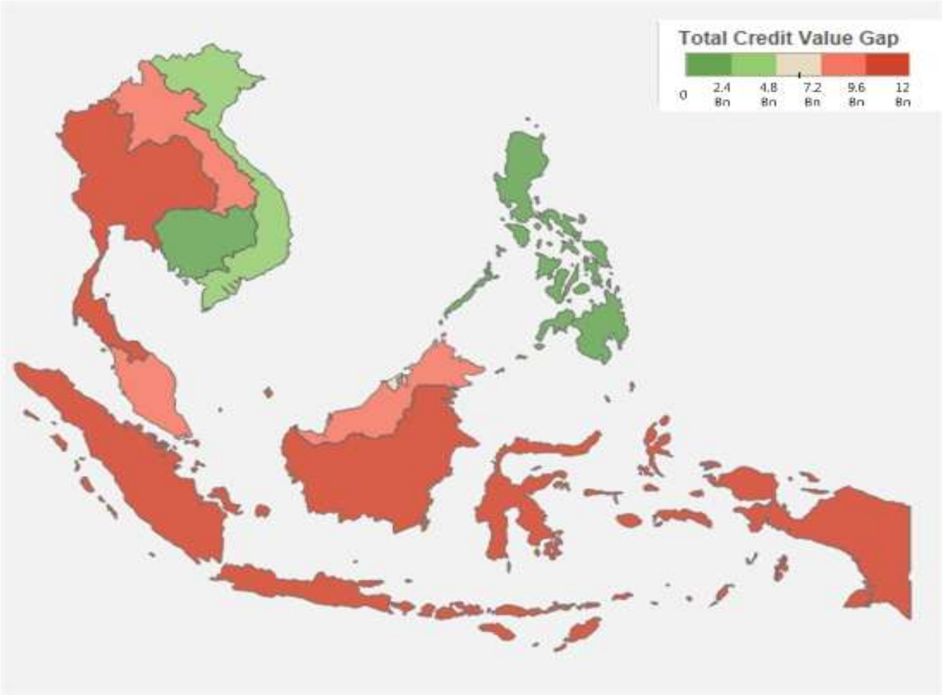
Policy measures are therefore needed to deepen and broaden financial markets with the aim of encouraging greater competition among financial resource providers, reducing the cost of borrowing, and stimulating greater provision of finance that will enhance the development of diversified products and services more suitable in meeting the needs of the SME.

2.3.2. Credit Gap in ASEAN

According to IFC and McKinsey Research in 2010, credit gap in AMS was approaching more than 59%. It was higher compared to Sub-Saharan Africa credit gap (40%-59% range of credit gap), Central Asia and Eastern Europe (20%-39% credit gap). It was also far from Latin America region with the credit gap less than 20%.

According to Oliver Wyman (2013), emerging markets account for only 22% of the world of total credit channelled to SME but make up 60% of the world total SME funding gap. Among emerging markets, Asian's SME have especially poor access to credit. Less than 15% of Asian SME has credit lines, compared to 24% in Latin America, and 28% in Central Asia and Eastern Europe. Those evidences support the need to fill the large credit gap in AMS.

Figure 2.4. Total Credit Value Graph in AMS



Source: SME Finance Forum (2014)

SME Finance Forum compiled primary databases such as World Bank Enterprise Surveys and McKinsey Global Banking Profit Pools to estimate the value of credit gap across countries. Credit gap is calculated based on the difference between potential need of formal financing (approximated to be 20% of SME's revenues) and availability of formal financing (approximated as 50% of outstanding credit amount). Among AMS, credit gap value average is USD 6,722,786,577. Indonesia possesses the widest gap of USD 11,774,801,655 while the lowest belongs to Cambodia, being USD 446,794,700.

CHAPTER 3: THE IMPORTANCE OF CREDIT RATING SYSTEM FOR SME

3.1. Introduction

Banks have begun to turn their attention to the "middle" or "small" market or SME credit market that has long been underserved. Among other reasons, this reposition is to some extent driven by high intensity of competition in the large corporate market, which pushes many banks to explore and exploit the new segment of market. In addition to that, lots of government's policies to support SME's development and the prospect of earning high margin from this segment are also believed as other attracting factors for the bank to enter this market. Ever since, banks have attempted to develop their own business model to penetrate the market.

Despite of a promising market segment, failure to fully understand this market would put bank in a disadvantage position, including high non-performing loan, possession of risky (or toxic) assets, all of which end up in problem with bank's profitability. Small and medium business has a unique feature and has totally different characteristics compared to large corporation. Therefore, special effort must be conducted to cater the market. However, not all banks recognize and fully understand this situation.

3.2. Issues in Banking with SME

A prospective borrower knows better about its own capacity and creditworthiness than the potential lender, i.e. bank. However he/she has an incentive to provide selective information that would only favourable to him/her. Facing with this problem, it would be a challenge for the bank to select the borrower with low (zero) likelihood of default. This is commonly known as problem of asymmetric information between borrower and lender. Thus, without some reliable mechanisms that can bring up relevant information of the borrower, there can be a market failure in the sense that worthy projects fails to be funded.

For that reason, a potential lender typically conducts a rigorous examination of the borrower's financial condition, business prospect, managerial capacity, etc. before deciding to extend or not and on what the type and term of the loan. By so doing, the lender will be fully recognized the risk of default of the borrower. As a lending institution, banks in general have already performed such examination through its internal credit analysts that assess several aspects known as 5C criteria, consisting of borrowers' character, collateral, capacity, capital and condition.

For large corporate borrowers, banks can easily perform such examination procedure as they mostly have met the 5C's criteria. Large corporations typically have audited financial reports that describe overall financial capacity and capital structures of the company. As a large business they also have various forms of assets, like land, building, machineries, inventories, etc. to be used as collateral. Furthermore, the owner of large corporation is typically a respected businessman/businesswoman who has a well-known and good business reputation. All of these provide assurance for banks to extend whatever types, terms and size of loans the borrowers have required.

However, this is not the case for SME borrowers. First and foremost, from the bank's point of view SME fail to meet all 5C's criteria in banking. Majority of SME do not have an appropriate, not to mention an audited financial report that portray their financial capacity and capital structure. Most SME still have poor record keeping of their sales, expenditure and other business activities. Such condition makes it hard for bank to examine their financial capacity and capital. Another common problem from the bank's point of view is the amount of guaranteed collateral. As their size of business has not developed very much, they do not have sufficient asset to be used as collateral to guarantee their loan. In general practice, banks accept only fixed asset (e.g. property, land, building) as collateral, those of which SME are lacking. All of these have made banks perceived SME as a high risk borrower and for that have to charge them with higher interest rate to compensate for their risk.

Secondly, most SME finding it difficult to approach the banks and requesting for loans, as the formalities, i.e. documents to be filled and complied with banking system requirement is cumbersome and use up most of their time, leaving very minimal time to concentrate on their business. Furthermore, banks also need some time to process SME loan proposal, whilst SME often need a quick cash to run their business. Such time mismatch has made SME shifted to other lender institutions. All of these factors have made stacks of loan proposals from SME are being rejected by banks. As a result, their business is lacking of growth, not in the position either to sustain or expand their business.

A number of studies (e.g. Schiffer and Weder 2001, IADB 2004, Beck, Demirguc-Kunt and Maksimovic 2005, Beck, Demirguc-Kunt, Laeven and Maksimovic 2006, Beck, Demirguc-Kunt, and Martinez Peria 2008) by using firm-level survey data, have shown that access to finance and the cost of credit are perceived by SME as not only to be greater obstacles than large firms, but also constraint their performance more than large firms.

3.3. The Role of Credit Rating Agency for SME

Banks with sophisticated infrastructure have no problem conducting borrower's examination internally. These banks typically have wide range of assets, liabilities, and equity capital that support their operations and activities, and therefore a proper risk management has already been a vital and integral part of their operation. To assess, monitor and manage their risk portfolio, these banks have developed their own scoring or rating methods and tools, some even with computerized statistical model. The model allows bank to measure the default probabilities at different rating levels more accurately. It also helps bank to reduce risk exposure and to improve their profitability by reducing the number of potential default loans as well as minimizing the cost of bad debt recovery.

While the adoption of such rating methods and tools can be done easily for large corporate borrower, totally different case applies for SME as they have different characteristics as opposed to large companies. Some unique characteristics of SME, which are broadly identified, are low capitalization, limited recognizable assets, short business lifespan, poor access to capital markets, very large cash intensity in transactions, absence of dependable credit information/history, poor financial disclosure, and high credit risk perceptions coupled with high borrowing cost. In addition, it often takes some further cost for banks to acquire the detail of that information. Unless having specific information on SME, banks need extra effort to develop own scoring or rating models especially for SME borrower. This in turn, would make it uneconomical for bank to lend to SME, especially for micro businesses.

Thus, to reduce the cost of acquiring such information while at the same time reducing the bank's effort to deal with information asymmetry and hence relegate negative perceived risk about SME, some information infrastructure is required. Such infrastructure must be able to provide a cost-effective access to that information so that it creates incentive for lenders, i.e. banks to extend loan to SME.

The presence of external credit rating agency to some extent may help address this issue, especially for lenders who do not have any experience with SME. Lenders who do not possess historical data and information about SME find it very difficult to build the model for SME lending decision. In this case, rating agency can play a role both in mapping the landscape and undertaking diagnostic test on behalf of the lenders. The agency basically develops a generic model by utilizing the available historical data and information on SME from variety of source. Then the generic model is used to predict future outcome, about the likelihood of default of the SME borrower. By doing this, the rating agency deliver two objectives at once, that is to reduce asymmetry information and present a business proposition that is more "bankable" to the lenders. To a larger extent, such methodology also provides a standardized valuation that can be used among banks.

Accordingly, for the rating agency to have value, the potential lenders must believe the rating contains useful information about the creditworthiness of the borrower. Thus a reputation of being independent and unbiased is very important for a credit rating agency. Such reputation might be gained by a long track record of successful rating in markets. In addition, the reputation of the agency can also be reinforced if it is able to avoid conflict of interest, for example when rating agency is owned, managed, otherwise influenced by the institution being rated.

However, a key financial infrastructure for credit rating agency to be able to go forward is provision of a reliable and comprehensive database on SME credit information. A well-functioning credit information system either public or private institutions not only it can contribute to both expansion of credit and reduction in lending cost but it also helps lenders (bank) to assess the credit exposure. A credit registry or bureau will be more effective if to supply both positive and negative information from regulated and unregulated institutions (e.g. utilities, retailers), build credit histories for a large number of potential borrowers, and process a comprehensive credit report timely. It may also facilitate the adoption of new lending technology based on credit rating models.

What Does Credit Rating Agency Do?

In general, by employing its own model credit rating agency (CRA) assesses the creditworthiness of the borrower and compares it between its peer groups. This rating is business entity-specific and not specific to debt issuance. The company will be analysed internally and awarded rating according to the company's credit worthiness, its management team and effective relationship with its customers and suppliers.

Unlike the large corporation, the SME has its own unique factors. The creditworthiness of SME therefore needs to be assess using tools and methods that are different from those traditionally used for large corporate. For instance, it is believed that the existing tools and methods in banking criteria (e.g. 5Cs) may be too excessive for SME and for that softer conditions are required. Further, variables or indicators to look at for SME are also different than those of large corporate.

Rating agencies assess a firm's financial viability and capability to meet business obligations, provide an insight into its sales, operational and financial composition, and thereby assessing the risk element, and highlights the overall health of the enterprise. They also benchmark its performance within the industry.

Rating classification is usually expressed by having different grades, either by using number or letter or both, ranging from the highest rating to the lowest. The rating agency provides the service by way of charging a fee depending on its business model (e.g. subscription or investor-pay model or issuer-pay model or both). The ratings are valid for a certain period (e.g. annually) and since then can be renewed by paying an appropriate fee. It is money well spent. For, a good rating means a higher chance of getting a loan.

3.4. Credit Rating for SME: Some Benefits

Over the years, the financial system has come to take credit ratings as an integral part of the framework for credit and investment decisions relating to larger enterprises. As the banking sector increasingly focuses on lending and providing other financial services to the SME sector, ratings can play the same pivotal role as they do for larger enterprises. The following are some benefits of having credit rating.

3.4.1. For SME

Concessional funding: A good rating can help SME gain faster and better credit term for the business as it provides information to the lenders about lower risk of default. Banks could offer preferential rate based on rating. For example, the concession rate enjoyed by SME in India, could range from 0.25% up to 1.25%. In some cases, banks have even approached the SME with funds. A good rating could also be used to approach other financial institution to get better rate bargain than the one provided.

Better business opportunities: A risk evaluation by an independent and unbiased rating agency lends credibility to SME and opens up an opportunity for them when dealing with its business partners (e.g. MNCs and large corporate). For instance, a good credit rating SME can participate for tender procurement and makes it more credible to gain bigger orders. It also provides easier access to other sources of finance to obtain additional funding. It even helps the SME retain customers and suppliers and negotiate better terms with them.

Tools for self-improvement: Another advantage of rating is that it highlights the strengths and weaknesses of the company and acts as a trigger for self-correction. It is like a report card for SME. SME are usually constrained by the strictness of rating discipline and fear of low rating, but the latter may not necessarily be the result of weak financials and can be attributed to various reasons. The issues can be easily pointed out in the rating report. The SME that want to run a sustainable business take the feedback positively and try to improve the business. It is an opportunity to adopt and implement best business practices. Moreover, a regular renewal of ratings not only helps improve performance and build a firm's track record but also builds confidence within the trading partner.

3.4.2. For Lenders

A credit rating takes a significant portion of the perceived uncertainty out of their lending decisions, and reduces time and transaction costs in the system. The ratings from an independent agency, based on high standards, can provide greater confidence, objective and reliable opinion to lenders, and consequently broaden the range of financial resources available to SME. As rating reports provide most of the information banks need for approving loans, it can also serve as an additional input in the credit decision making process. Additionally, as the number of rated players in the SME sector increases, there will be greater transparency in financial service, as more and more information is made available. Overall, the ratings can help provide an important momentum in raising standards through better financial discipline, disclosure and governance practices. Lastly, this in turn, will help lenders reducing their NPL.

3.4.3. For Regulator (Government)

The presence of SME credit rating system is not only improving access to finance for SME but to a larger extent also improving the financial inclusion in the country. As more and more SME are included in the financial system, the SME development is becoming more advanced. This will not only have contribution to generate more employment but also more income to the people, which in turn may reduce income gap and poverty.

Furthermore, as growingly banks adopt and use this rating mechanism as part of their lending practices, a healthier competition will be created in the banking industry, especially related to SME banking. In the end, this will also bring along prudential and stable financial industry in the country.

CHAPTER 4: SME CREDIT RATING INFORMATION INFRASTRUCTURE-CASE STUDIES IN THREE NON ASEAN COUNTRIES

The chapter will describe SME credit rating infrastructure in three selected non ASEAN countries, which are: France, Japan, and India. The description will cover institutional aspect, financing aspect, business process and rating methods for SME credit rating in each country. In addition, the chapter will also describe policies of the respective countries to support SME.

4.1. France

According to the French National Institute for Statistics and Economic Research (INSEE), SME in France account for 99.8% of enterprise volume, 64.1% of total employment and 52.8% of total revenue. Currently, SME Development Bank is government organization that plays central role in French financial sector that provides financial assistance to SME. France has several credit rating agencies, and the agency that is also conducted rating for SME is the one under the central bank of France named **Banque de France (BDF)**. Further details of BDF will be explained below.

Institutional Aspect

BDF is formed by the central bank of France, hence it is owned by the government. The institution conducts credit rating and applies the rating to calculate capital requirements of company. The credit rating reflects BDF overall assessment on the ability of a company to meet its financial commitment for three years.

Financing Aspect

This institution operates by obtaining funds from customers which are comercial banks. About 280,000 companies in France are rated by the Banque de France per year with turnover of more than USD 955K (750K €).

Business Process

This institution is supervised by BDF as part of the European System of Central Banks (ESCB), which consists of the European Central Bank (ECB) and national central banks (NCBs) of all EU Member States. BDF develops credit rating report through several stages, from collecting data and information, conducting analysis, preparing rating proposal, and developing final rating.

The data collected and analysed by BDF are used to conduct a comprehensive assessment of a company credit risk. The data comprise of:

- Descriptive data: company name, business code, address of registered office, legal form, capital, date of establishment, etc.
- Accounting and financial data: company accounting records in order to see whether companies' turnover exceeds a certain level, whether companies' bank loans are above a certain threshold, or whether companies belong to a business group. In addition, BDF also collected data related to trade payment incidents and loans reported by credit institutions.
- Legal information: data on legal history of commercial cases of the company. The information is collected from commercial or civil courts.
- Data relating to companies' economic and financial environment: managers, partners, companies owned, etc.
- Qualitative data: Qualitative data are collected during interviews with managers of the companies. These interviews provide a more precise financial analysis by collecting additional information.

These data are collected from the companies themselves, registries of commercial courts, INSEE, and credit institutions.

Rating Method

BDF applies different rating methods compare to other credit rating agency, where BDF includes qualitative data in performing the rating. Including qualitative data in the rating method is considered suitable for SME, since financial data analysis is not sufficient to assess credit of SME. The qualitative assessment among others includes:

- Characteristic of sector, management, projects, ability to raise funds (similar to economic environment).

- Managers, interviews, press (different sources of data).
- Interview with firm's management for about 20% of population.

As for quantitative methodology, BDF includes the following financial aspects:

- Company's earning: assessment of company ability to gain earning (indicators: net income, EBITDA, etc.).
- Company's ability to pay debts: assessment of the company's ability to generate funds to pay its debts (indicators: self-financing capacity; stable financial debts; interest and related expenses, etc.).
- Solvency: assessment of company of equity (indicators: net equity; financial indebtedness; total balance sheet, etc.).
- Company's balance sheet: assessment of the company's liquidity in order to assure good balance of asset and liability of the company (indicators: total net working capital, assets with maturities of less than one year and liabilities with maturities of less than one year).

Based on the quantitative methods, BDF develops a grading/scale of rating. The SME credit rating can be divided into two broad categories: financial aspect and qualitative aspect. The financial aspect includes profitability, financial autonomy, financial structure, and liquidity. There are 11 grades of rating based on the financial assessments, which are:

Table 4.1. Rating Scale of BDF

Rating Scale	Explanation
3++	Excellent
3+	Very Good
3	Good
4+	Quite Good
4	Acceptable
5+	Poor
5	Fairly Poor
6	Very Poor
7	Cause for concern on the grounds of at least one reported payment incident
8	At risk on account of the payment incidents recorded
9	Compromised, with reported payment problem indicating severe cash flows
P	Insolvency proceedings (turnaround procedure or judicial liquidation)
0	No unfavourable information

Source : *www.banque-france.fr*

<u>Incentive</u>

BDF ratings are a useful benchmark to measure the reliability of bank internal models in giving credit to SME. Major user of BDF rating is French Banking Supervision.

4.2. Japan

Japan as a developed countries has several credit rating agencies, but one that will be discussed here is only **Japan Credit Rating Agency, Ltd (JCR)** and the credit grantor agency which named **Credit Guarantee Corporation (CGC JAPAN).** Both of these agencies have different entities, but they provide credit assistance for SME In Japan. Details concerning the agencies are presented below.

4.2.1. JCR

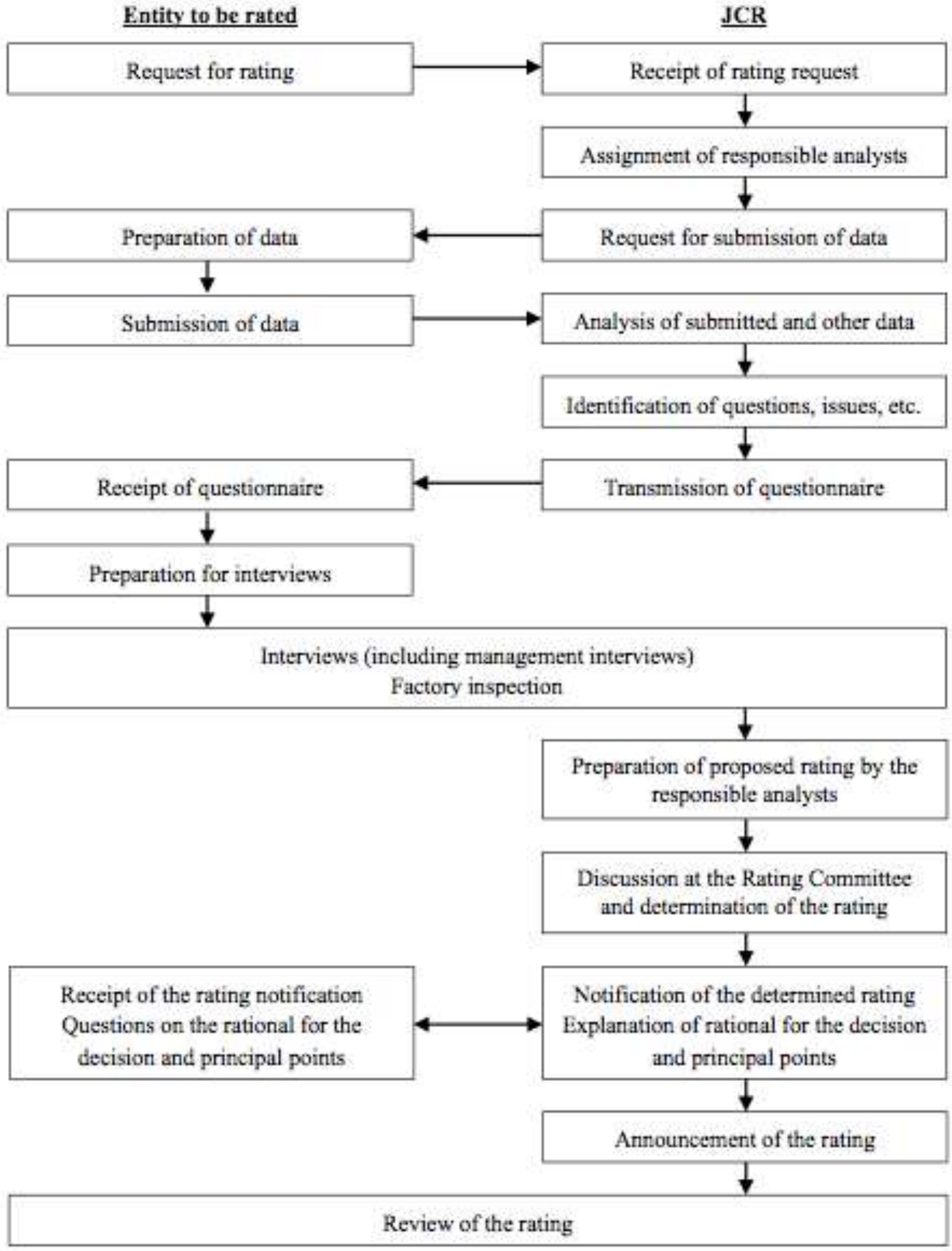
Institutional Aspect

JCR is a Japanese financial services company which publishes credit ratings for Japanese companies, local governments, and other interested parties. JCR is also an eligible External Credit Assessment Institution (ECAI) for the regulatory purpose of using its ratings to determine the risk weights to evaluate bank exposure under the BASEL II Framework. Currently, the JCR has 584 million yen (5,100 USD) in paid-in capital. However, this agency is not specifically intended for SME rating. Based on some literatures, JCR provides rating of corporates, financial institutions, public sectors, structured finance, sovereign and supranational, medical Institutions, educational institutions, and others.

Business Process

For data collection and data input, JCR has several stages as can be seen in the below figure. JCR starts from receiving request of rating to announcing and reviewing the rating.

Figure 4.1. Business Process of JCR



Source: www.*jcr.co.jp*

Rating Method

Since JCR is not specifically assessed SME credit rating, hence, the methods presented here is the methods applied by JCR in assessing corporate credit rating.

- Assessment of Credit Strength

  When assessing credit strength, it is important to determine whether the volume (profitability) and stability of cash flow matches that of the obligation to be repaid. It is extremely important to analyse relationship between cash flow and obligations, because no matter how large the cash flow is, if the obligation is heavy then it will be a heavy burden for the company.

- Corporate Default Rate Estimation.

  It is used to estimate default probability of a corporation based on its financial information

- Guarantees and Keep-Well Agreement

  With obligations supported by a guarantee or keep-well agreement, both the principal obligor and the guarantor (or the provider of the keep-well agreement) are rated individually on their ability to pay principal and interest on the obligation.

For corporate credit assessment, there are two aspects evaluated by JCR, which are business foundation and financial foundation. Details of indicators are presented below.

Table 4.2. Business and Financial Foundation Assessment of JCR

Business Foundation	Financial Foundation
▪ Properties of the industry (Industry Trends) ▪ Position in industry and competitiveness ▪ Properties of corporate entities ➢ History ➢ Management ➢ Shareholders and affiliations ➢ Employees ➢ Sales composition ➢ Production and sales conditions ➢ Status of capital investments ➢ Technology level and research and development capabilities ➢ Subsidiaries and affiliates ➢ Management plan	▪ Major matters ▪ Capital composition ➢ Liquidity ➢ Stability ➢ Funding

Source: www.*jcr.co.jp*

Based on its rating methods, JCR implements grading system/scale of rating as follows:

Table 4.3. Rating Scale of JCR

Rating Scale	Explanation
AAA	The highest level of certainty of an obligor to honour its financial obligations
AA	A very high level of certainty to honour the financial obligations
A	A high level of certainty to honour the financial obligations
BBB	An adequate level of certainty to honour the financial obligations. However, this certainty is more likely to diminish in the future than with the higher rating categories.
BB	Although the level of certainty to honour the financial obligations is not currently considered problematic, this certainty may not persist in the future.
B	A low level of certainty to honour the financial obligations, giving cause for concern
CCC	There are factors of uncertainty that the financial obligations will be honoured, and there is a possibility of default.
CC	A high default risk
C	A very high default risk
LD	JCR judges that while an obligor does not honour part of the agreed to financial obligations, but it honours all its other agreed to financial obligations.
D	JCR judges that all the financial obligations are, in effect, in default.

Source: www.*jcr.co.jp*

Comparing to other credit rating agencies, JCR has a very good system for handling complaints from the clients. JCR has a specific department - the Information Service Department - that is primarily responsible for responding to complaints, etc. All objections and comments on JCR's credit rating activities will be reviewed by the responsible employees in JCR's rating departments or divisions. JCR also appropriately and promptly responds to complaints and provides feedbacks to the clients. However, JCR will not respond to anonymous complaints. JCR will record and keep all the complaints for a certain period of time, and the company can refer to them as needed for improving its business.

4.2.2. CGC

Institutional Aspect

Credit Guarantee Corporations (CGC) is a public institution that supports SME as a credit guarantor so that SME can borrow money from financial institution for their business operations. The credit guarantee system improves SME credit worthiness, which is usually lack physical collateral and has weak credit standing. The CGC help directing funds to SME from private financial institutions and provide smoother access to financing for SME. A key characteristic of the credit guarantee system in Japan is that it is a combination of the credit guarantee system operated by CGC, which were mainly established with financial assistance of local government, and the credit insurance system operated by the Japan Finance Corporation, an institution owned by the national government. The combination of these two systems is often referred to as the credit supplementation system.

Financing Aspect

The operation of CGC is financed primarily by credit guarantee fees. In order to strengthen their financial position, CGC are also financially supported by the national government and local governments. In addition, CGC also get return on investment of their assets.

SME in Japan are subsidised by national government: Ministry of Finance, Ministry of Economy, Trade and Industry (Small and Medium Enterprise Agency). Types of financial support for SME in Japan are:

- Subsidies for CGC's fund

  Subsidies paid by the national government to CGC in order to ensure a smooth supply of funds to SME and strengthen the financial positions of CGC.

- Compensation for the loss

  Subsidies paid by the national government to CGC to allow the National Federation of Credit Guarantee Corporations (NFCGC) to cover losses of CGC resulting from the uninsured portion of subrogated payments made under guarantees in response to specific funding demand designated by the national government (they include interest-free loans aimed at strengthening the financial position of CGC).

- Investment in Japan Finance Corporation (JFC – Fund for Credit Insurance)

  Funds that the national government invest in JFC are aimed to strengthen the financial foundations of its credit insurance operations.

- Loan Fund

  Loan from the national government at low interest rates to CGC through Japan Finance Corporation is intended to enable them to expand the guarantees for SME (no such loans have been made since 2008).

For additional information about the fees, CGC has a ceiling on guarantee and credit guarantee fee. The money paid by SME to CGC for guarantees are used to pay credit insurance premiums, cover losses when loans are repaid on behalf of SME, administrative expenses relating to the operation of the system, and so on. The ceiling on guarantee scheme for SME is as follow:

Table 4.4. Guarantee Ceiling of CGC

	Individuals/ Corporation	Cooperatives, etc.
General Guarantees	¥200 million (1.8 million USD)	¥400 million (3.7 million USD)
Guarantees Without Collateral	¥80 million (750K USD)	¥80 million (750K USD)
Bond Guarantees	¥450 million (4.2 million USD)	-

Source: Credit Guarantee System in Japan, 2012

Besides the above, many special guarantees for SME have been established based on government measures and ceilings are set on these guarantees as appropriate.

Table 4.5. Special Guarantee of CGC

No	Credit Guarantee Fee Rate Under Responsibility-Sharing System	(Special Guarantee)	Credit Guarantee Fee Rate Except Responsibility-Sharing System	(Special Guarantee)
1	1.90	1.62	2.20	1.87
2	1.75	1.49	2.00	1.70
3	1.55	1.32	1.80	1.53
4	1.35	1.15	1.60	1.36
5	1.15	0.98	1.35	1.15
6	1.00	0.85	1.10	0.94
7	0.80	0.68	0.90	0.77
8	0.60	0.51	0.70	0.60
9	0.45	0.39	0.50	0.43

Note: unit is in annual rate (%)
Source: Credit Guarantee System in Japan, 2012

*1. Bill discount revolving guarantee, Overdraft revolving guarantee and Business card loan revolving guarantee are classified in the special guarantee.

*2. Credit guarantee fee rates applied to credit guarantee systems employing special insurance, or those to which the same credit guarantee fee rates are applied nationwide, etc. are determined separately.

Business Process

There were only three CGC in Japan before World War II. However, after the war, the credit guarantee system was employed as one of the means to help the economy got back on its feet. Hence, CGC were established around Japan with financial support from local governments. The current CGC in Japan are established pursuant to the Credit Guarantee Corporation Law, and they play important roles to ensure smooth access to finance of SME.

CGC were originally established as incorporated foundations or incorporated associations, which are types of organization prescribed in the Civil Code. However, as their operations expanded, the Credit Guarantee Corporation Law was enacted to ensure that CGC could properly perform their functions. In addition, there is a credit insurance provided by Small Business Credit Insurance Corporation (now the JFC), which was established afterwards, has served to spread the risks incurred by the CGC, and this combination of two systems developed into what is now known as the credit supplementation system.

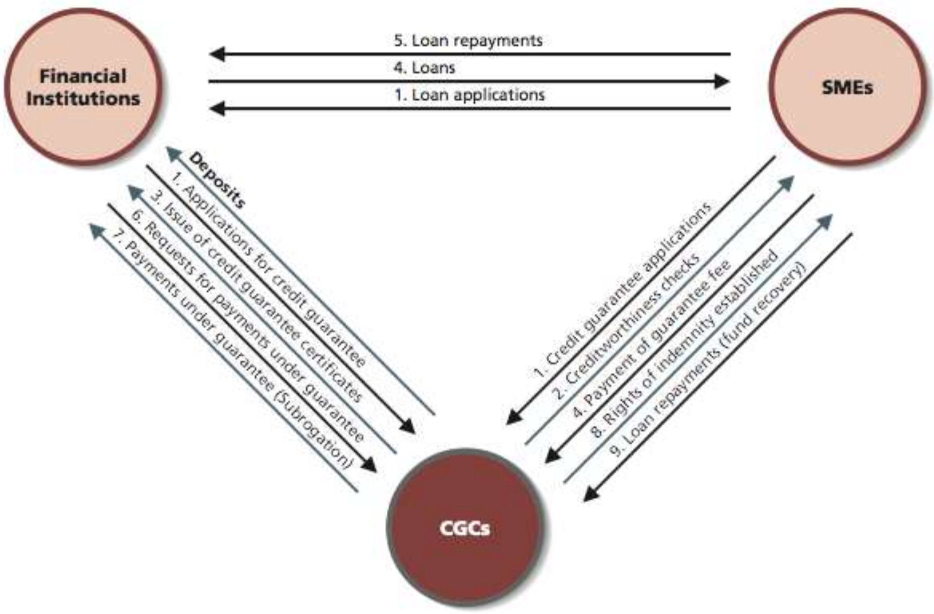
CGC are also performed as credit guarantor companies. The company also received assistance from national government, local government, NFCGC, JFC, Financial Institution, and SME.

Business process of CGC can be seen in Figure 4.2 and can describe as follows:

1) SME apply credit rating through financial institutions or directly to CGC;
2) Upon receipt of an application, CGC carries out credit checks on the enterprise;
3) If CGC approves the application based on the credit checks, it issues a credit guarantee certificate to the financial institution. In the case where CGC receives an application for a credit guarantee directly from a SME, CGC arranges for a financial institution to extend a loan to the company. After obtaining loan approval from the financial institution, CGC issues a credit guarantee certificate;
4) The financial institution extends a loan to the enterprise based on the credit guarantee certificate. The enterprise pays a guarantee fee to CGC;

5) SME makes loan repayments to the financial institution in accordance with the terms and conditions of the loan;
6) In the event that SME is not able to make all or part of the repayments within the term, the financial institution requests CGC for payment under guarantee (it is called subrogation);
7) CGC makes repayments on the loan to the financial institution on behalf of the enterprise;
8) Because payment has been subrogated, CGC obtains a right of indemnity against the enterprise;
9) CGC recovers the right of indemnity from the enterprise, while assisting SME to rebound.

Figure 4.2. Business Process of CGC



Source: Credit Guarantee System in Japan, 2012

Rating Method

The Credit Guarantee System in Japan is characterised by two functions, which is known as a "Credit Supplementation System" as follows:

- A "Credit Guarantee" function that enables CGC to guarantee financial institution against risks associated with loans to SME. Other purposes are: (a) provide guarantees on business loans to CGC; (b) recovery from SME considering their actual conditions; and (c) finance and management consultation for SME.

- A "Credit Insurance" function in which JFC funded by public money reinsures these credit guarantees. Other purposes are: (a) Insurance for credit guarantees which CGCs provide to SME; and (b) Loans for CGC to enable them to expand the guarantees they offers to SME (no such loans have been made since 2008).

4.2.3. Credit Risk Database (CRD)

In Japan, the Credit Risk Database (CRD) Association has been collecting financial data of SME for more than 10 years. It is now possible to rate SME by analysing a large amount of data accumulated to date.

CRD was established in March 2001 as a membership organization with objective of collecting financial and non-financial data, including default information on SME. It started as a voluntary association consisting 52 credit guarantee corporations in Japan.

The purpose of establishing CRD was to simplify and to promote the efficiency of SME financing by assessing their business conditions based on data and by measuring credit risks related to SME financing.

As the membership and data collection expanded, CRD established itself as a centre for data on SME. In April 2005, it obtained the corporate status of a limited liability intermediate corporation and officially became CRD Association. In June 2009, the status changed to a general incorporated association as a result of the enforcement of the act on general incorporated associations and general incorporated foundations.

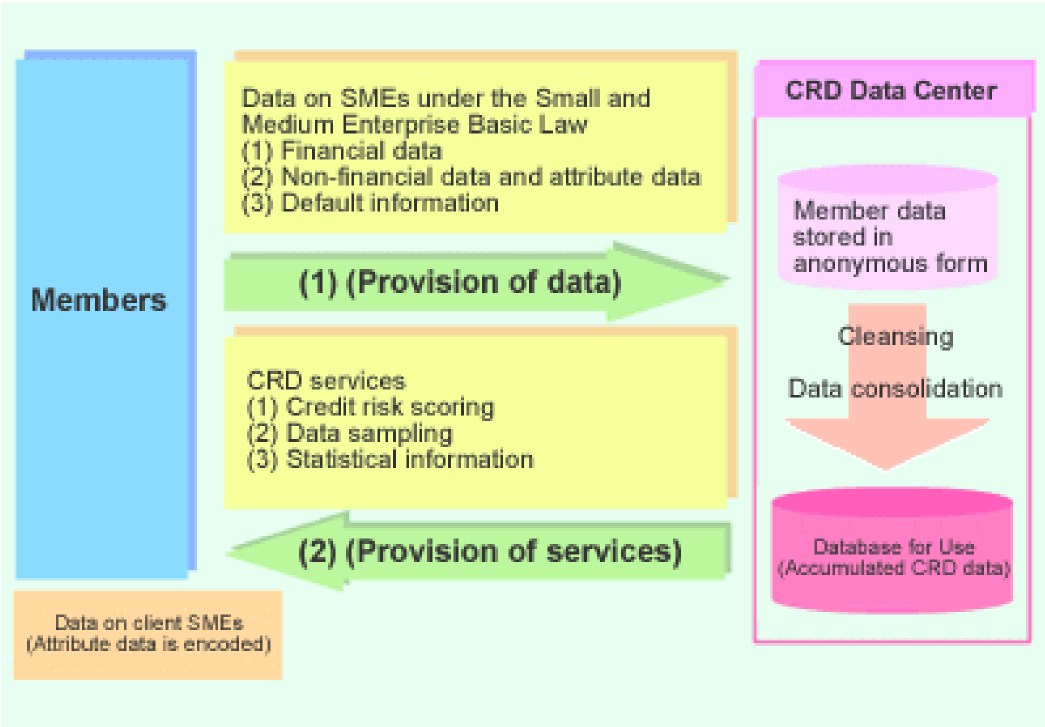
CRD Association collects financial data of SME from members — credit guarantee corporations throughout Japan, and government-affiliated or private financial institutions involving SME business. In return, CRD gives the members the assessment of SME's business situations using a credit risk measurement model.

<u>Business Process</u>

The business process of CRD is presented in Figure 4.3 as follows:

- Members of CRD Association (credit guarantee corporations and financial institutions) provide CRD with financial/non-financial data and default information of SME with whom members have relationships (the names of the SME are encoded so that they cannot be specified).
- CRD returns to members with a variety of services by utilizing the accumulated data.

Figure 4.3. Business Process of CRD



Source: CRD Website

4.3. India

India is a developing country, but the credit rating in this country has been provided quite a lot and some of them, is sufficient and reliable. Thus, it can be concluded that SME in this country is growing. There are several well-established credit rating agencies but only three of them will be discussed namely **ICRA Limited** (formerly Investment Information and Credit Rating Agency of India Limited), **CRISIL**

(Credit Rating Information Services of India Limited), and **SMERA** (SME Rating Agency of India).

4.3.1. ICRA Ltd

Institutional Aspect

ICRA was established in 1991 by leading Indian financial institutions and commercial banks. Moody's is the largest shareholder of ICRA. ICRA has a dedicated team of professionals for the MSME sector and has developed a linear scale for MSME sector which makes the benchmarking with peers easier. It offers its MSME Rating Services in two ways: (i) ICRA-NSIC (National Small Industries Corporation Limited) Performance and Credit Rating for SSIs (Small Scale Industry Units), (ii) ICRA SME Ratings.

The purposes of ICRA are to:

- Provide information and guidance to institutional and individual investors/creditors.
- Enhance the ability of borrowers/issuers to access the money market and the capital market for tapping a larger volume of resources from a wider range of the investing public.
- Assist the regulators in promoting transparency in the financial markets.
- Provide intermediaries with a tool to improve efficiency in the funds raising process.

Financing Aspect

Currently, ICRA does not charge any fee or receive any compensation from its rating/grading clients for disseminating their ratings/grading and the related analysis/commentary. Such dissemination is usually done through channels including ICRA's website and its publications.

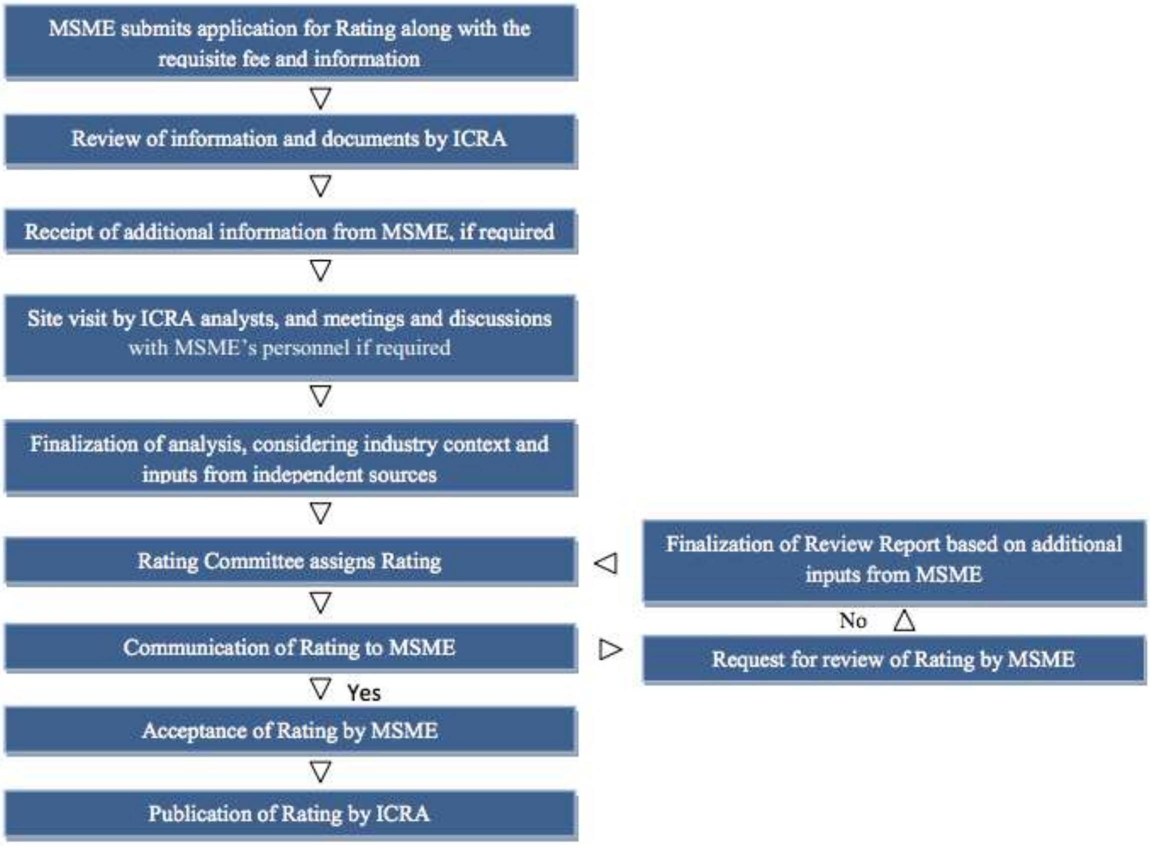
The fee for the rating service is currently subsidized by the Government of India, making it a unique opportunity for small enterprises to get themselves rated. An eligible SSI can also pay the rating fee and. The first payment is subsidized by NSIC so SSI will only pay concessional fee to ICRA.

Business Process

ICRA is one of the leading Credit Rating Agencies in India with Moody's Investor Service as the largest shareholder. ICRA draws upon the long and extensive experience of Moody's Investors Service to constantly fine-tune its own Rating Methodologies and criteria to process the rating.

Figure below shows the rating process of ICRA.

Figure 4.4. Business Process of ICRA



Source: *www.icra.in*

Rating Method

ICRA maintains absolute independence from market participants to provide unbiased opinions. The ratings are a result of collective judgment of committee members. ICRA's in-house research and database ensure that opinions are supported by objective benchmarks and per comparison. In addition, ICRA also has the following benefits:

For lenders, an ICRA MSME Rating would:

- Provide an objective, independent and reliable opinion on credit quality.
- Serve as an additional input in the credit decision-making process.
- Assist in risk pricing and capital allocation.
- Facilitate portfolio management and monitoring.

For the rated MSME, an ICRA MSME Rating may help to:

- Improve the comfort level with prospective/existing lenders.
- Negotiate better terms on the basis of the credit quality reflected by the Rating.
- Reduce the time involved in obtaining loan approvals.
- Project a better image to prospective/existing trade partners.
- Carry out self-evaluation and take timely and corrective measures for improvement.

For quantitative methodology, ICRA ratings are based on an in-depth study of the industry and an evaluation of the strengths and weakness of the company. The inherent protective factors, marketing strategies, competitive edge, level of technological development, operational efficiency, competence and effectiveness of management, hedging risks, cash flow, trends and potential, liquidity, financial flexibility, government policies, past records of debt servicing, sensitivity to possible changes in business/economic circumstances are looked into.

For qualitative methodology, ICRA focuses in particular on the following aspects. ICRA evaluates factors such as the candidate SME's management, ownership, organization structure, key human resources, industry characteristics, competitive position of the MSME, operating efficiency, management quality, succession plan, relationship with employees, commitment to new projects and other associate concern, funding policies, track record with lenders, trade relations with suppliers and customers, business environment, financial strength, operating efficiency and capabilities, and other non-financial parameters that may have a bearing on its creditworthiness. After quantitative calculations are done, ICRA assigns rating categories to the company.

Table 4.6. Rating Scale of ICRA

Rating	Definition
ICRA SME 1	The highest-credit quality rating assigned by ICRA to an SME.
ICRA SME 2	The high-credit credit quality rating assigned by ICRA to an SME.
ICRA SME 3	The adequate-credit quality rating assigned by ICRA to an SME.
ICRA SME 4	The moderate-credit quality rating assigned by ICRA to an SME.
ICRA SME 5	The inadequate-credit quality rating assigned by ICRA to an SME.
ICRA SME 6	The risk-prone-credit quality rating assigned by ICRA to an SME.
ICRA SME 7	The poor-credit quality rating assigned by ICRA to an SME.
ICRA SME 8	The lowest-credit quality rating assigned by ICRA to an SME.

Note: For the Rating categories ICRA SME 2 through to ICRA SME 7 the sign of + (plus) or – (minus) may be appended to the Rating symbols to indicate their relative position within the Rating categories concerned. Thus, the Rating of ICRA SME 2+ is one notch higher than ICRA SME 2, while ICRA SME 2– is one notch lower than ICRA SME

Source: *www.icra.in*

4.3.2. CRISIL

Institutional Aspect

CRISIL is the largest credit rating agency in India, with a market share of greater than 60%. It is a full service rating agency offering its services in manufacturing, service, financial, and SME sectors. CRISIL has published criteria for all the major business segments in the corporate, infrastructure and financial sectors in addition to those for structured finance, governance and value creation, mutual funds, real estate developers and projects, maritime institutions, educational institutions, microfinance institutions, and SME – this is the widest range of criteria in India. CRISIL is owned by a private company in India. It is also incorporated and promoted by erstwhile ICICI Ltd (India's largest private sector bank) along with UTI (Assets Management Company) and other financial institutions.

The nature goals of CRISIL are:

- Build credibility and position itself as a reliable business partner.
- Enhance the confidence of potential customers, suppliers, and bankers.

- Gain a vital advantage by setting it apart from competitors.
- Create greater visibility by developing their market potential.
- Build a better market identity and attract global customers.
- Increase business opportunities through online positioning.
- Reduce delay in lead-maturity by expediting decision-making.
- Reduce the risk of transaction failure by enabling buyers to make informed decisions.
- Leverage on the CRISIL brand and differentiate it from peers.
- Access an effective medium to showcase their products, services, and business activities.

Financing Aspect

CRISIL's majority shareholder is Standard and Poor's (S&P). S&P is a part of McGraw Hill Financial (formerly The McGraw-Hill Companies), the world's foremost credit rating provider. The alliance with the world's leading rating agency adds a new dimension to CRISIL's methodologies. It provides CRISIL with exposure to the international rating markets and to S&P's rating processes.

CRISIL charges fees from its customer. Table below shows rating fee for SME.

Table 4.7. Rating Fee of CRISIL

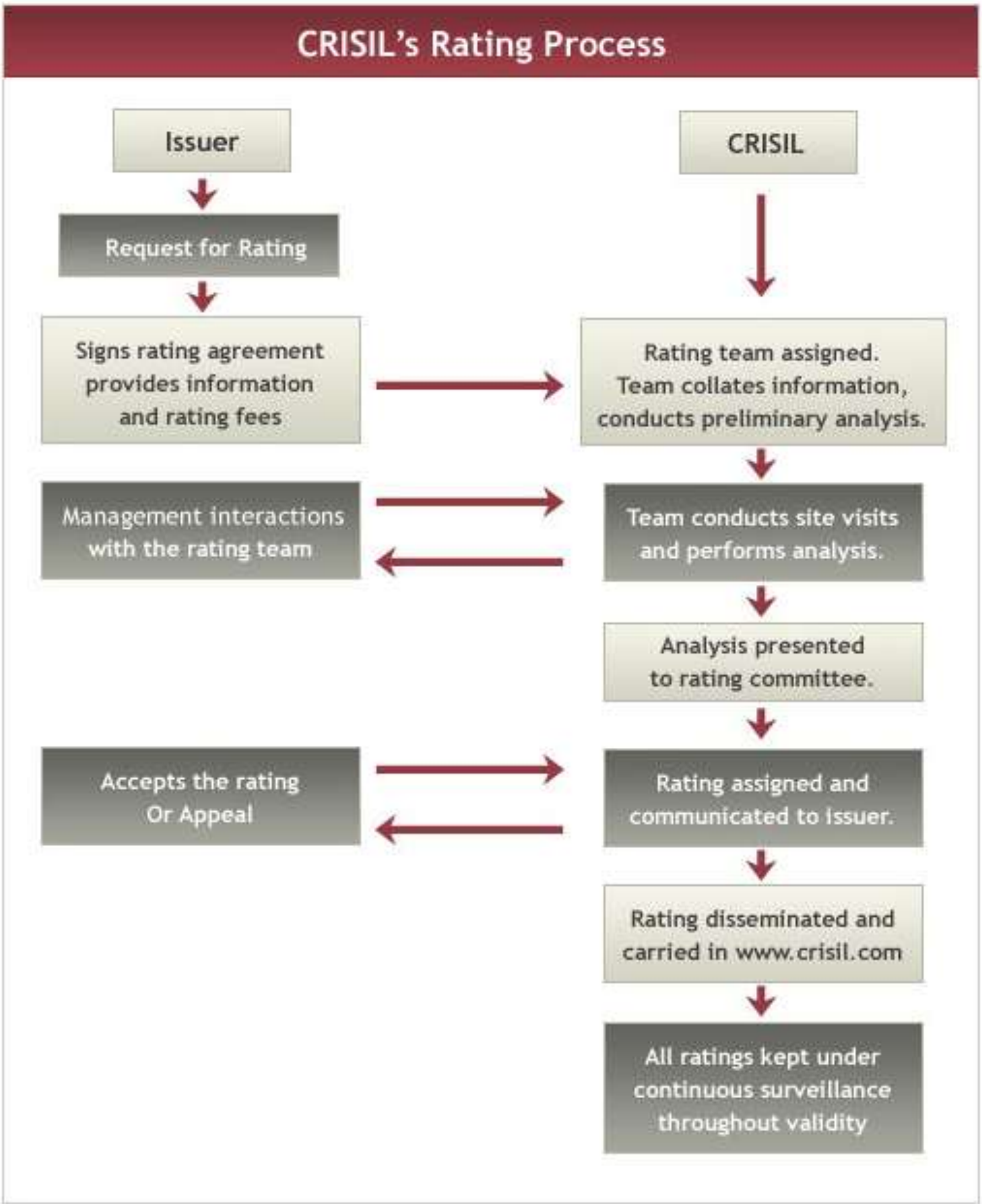
Turnover (RsCrore)	Rating Fees	Service Tax	Total
< 10	60,000 INR	7,416 INR	67,416 INR
10 - 25	65,000 INR	8,034 INR	73,034 INR
25 - 50	70,000 INR	8,652 INR	78,652 INR
50 - 75	85,000 INR	10,506 INR	95,506 INR
> 75	110,000 INR	13,596 INR	123,596 INR

Note: Companies under operation refer to SSIs /SME with audited results of one complete year of operations.
Source: *www. crisil.com*

Business Process

CRISIL's ratings process is designed to ensure that all ratings are based on the highest standards of independence and analytical rigor. From the initial meeting with the management to the assignment of the rating, the rating process normally takes three to four weeks. However, CRISIL has sometimes arrived at rating decisions in shorter timeframes, to meet urgent requirements. The process of rating starts with a rating request from the issuer and the signing of a rating agreement. CRISIL's representatives conduct site visit, perform analysis and have a discussion with the enterprises. Then, CRISIL prepares the rating report, assigns a rating and sends the report to the enterprises. Lastly, CRISIL will publish the rating on the website if the enterprises allow.

Figure 4.5. Business Process of CRISIL



Source: *www.crisil.com*

Rating Method

CRISIL empower their customers, and the markets at large, with independent analysis, benchmarks and tools. These help lenders and borrowers, issuers and investors, regulators, and market intermediaries make better-informed investment and business decisions their offerings allow markets and market participants to become more transparent and efficient - by mitigating and managing risk, taking pricing decisions, generating more revenue, reducing time to market and enhancing returns. By helping shape public policy on infrastructure in emerging markets, we help catalyse economic growth and development in these countries.

For qualitative methodology, the analysis looks at the fund management processes and practices followed by the fund in day-to-day operations. This study is in the nature of a hygiene factor, whereby it is evaluated if the fund operates within acceptable limits of its routine processes. If so it then becomes eligible for the rating. The qualitative analysis focuses on the following key issues:

- Management Evaluation: CRISIL believes that the quality of a funds management is critical to its overall performance. Factors like the management's track record in the fund management business and the quality of its key personnel are studied.
- Investment Strategy: CRISIL also studies the fund's internal credit analysis and security evaluation, asset selection, and credit surveillance procedures. In addition, the fund's track record is also examined.
- System and counter-parties: the fund's systems and procedures for executing investment decisions, back office systems, reconciliation with custodians and registrars, calculating of net asset value, tracking of interest payments, empanelment of brokers and dealing with counterparties are also factored into the rating.

Table below shows the scale of the SME rating:

Table 4.8. Rating Scale of CRISIL

CRISIL SME Rating	Definition
SME 1	Highest
SME 2	High
SME 3	Above Average
SME 4	Average
SME 5	Below Average
SME 6	Inadequate
SME 7	Poor
SME 8	Default

Source: *www.crisil.com*

4.3.3. SMERA

Institutional Aspect

SMERA Ratings Limited (formerly SME Rating Agency of India Ltd) is a joint initiative of Small Industries Development Bank of India (SIBDI), Dun & Bradstreet Information Services India Private Limited (D&B), and leading public and private sector banks in India. SMERA commenced its operations in 2005 as an exclusive credit rating agency for MSME sector in the country. Within a span of 8 years, SMERA has assigned ratings to over 30,843 MSME in India.

SMERA has achieved the reputation of providing comprehensive, transparent and reliable ratings, thus providing comfort and confidence to lenders and investors alike in decision making. SMERA Ratings have gained wide acceptability and are now an integral part of the risk assessment process within the lending and investing community. SMERA is supported and facilitated by the Government of India.

There are several important points to the nature of SMERA, which are:

- As aid in enhancing the credibility of the MSME unit.
- To help open doors to the corporate sector, especially for MSME having a large vendor base.

- To facilitate international trade and commerce by building confidence amongst potential trading partners.
- To motivates MSME in adopting good governance practices for long term benefits.
- To serve as a tool for self-evaluation and improvement.
- To enable entry in D&B's largest business to business (B2B) global database of over 162 million business records.

Financing Aspect

SMERA's funding is supported by the Department for International Development (DFID) UK. In addition, GTZ, Germany and World Bank support SMERA in technical assistance.

SMERA's competitive rating fees are subsidized for all eligible SSI units to the extent of 75% under the "NSIC – D&B – SMERA Performance & Credit rating scheme. SMERA's rating fees are decided before the rating exercise commences and the terms are provided to the issuers. The fee for a particular rating/grading is based on a variety of factors including, but not limited to, the type of rating being assigned, the principal amount of the issuance, and the complexity of the analysis that is involved in the rating process. Accordingly, SMERA may also consider having a separate fee schedule for volume issuers or for instruments which would require a higher level of analytical effort. SMERA reserves the right to modify its fee structures at any time.

The fee consists of a rating fee that is charged for the initial rating exercise. Further, an annual surveillance fee is payable by the issuer over the life of the rated security/instrument, if the rating is accepted and/or used. No surveillance fee is payable in case of a one-time grading exercise like Initial Public Offering (IPO).

Table 4.9. Rating Fee of SMERA

Category	Rating Fees	Service Tax*	Total
Less than 50 Lacs	40,050 INR	4,950 INR	45,000 INR
Between 50 to 200 Lacs	45,034 INR	5,566 INR	50,600 INR
More than 200 Lacs	59,986 INR	7,414 INR	67,400 INR

Note: * Service Tax is calculated as per present rate of 12.36%
Source : *www.smera.in*

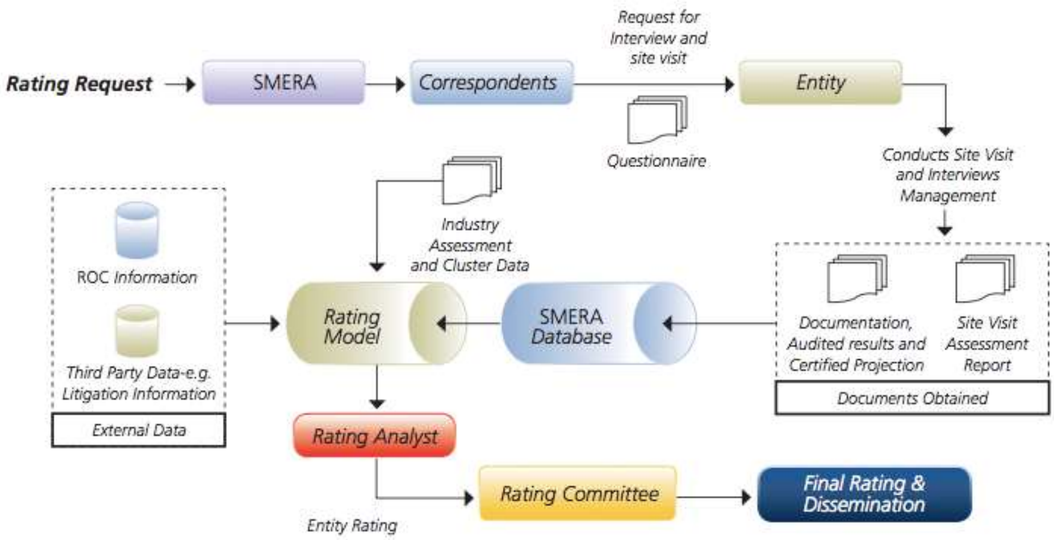
Business Process

SMERA has a separate team of personnel for business development for submission of offers for rating, negotiations with the clients and procurement of business. The rating is carried out by a separate team of personnel comprising analysts and others who are not in any way involved in business development and procurement. This ensures that business pressures do not in any manner influence the teams involved in developing rating criteria and in assigning the rating. Rating mandates are not solicited by promising specific ratings to issuers. SMERA has set up robust firewalls to ensure that employees involved in the rating fee negotiations for an issue or issuer do not participate in the rating process. There is also no linkage between the analyst's compensation and the rating fees paid by issuers. The fee payable to SMERA is in no way linked to the rating that is assigned to the instrument nor is there any linkage with the potential success or failure of the proposed issue.

Rating process in SMERA is as follows:

- MSME submit rating request by contacting the office or logging on to www.smera.in or email at info@smera.in.
- On receipt of the duly filled application form, relevant documents, and the applicable rating fees, SMERA will initiate the rating processes.
- As part of the rating process a SMERA representative will get in touch with the MSME to conduct a site visit and an interview with the promoter and key personnel of the MSME. A questionnaire seeking information on financial and qualitative factors would also be required to be filled by the SMERA representative with the assistance of the applicant.
- SMERA shall complete the evaluation process within 30 working days on receipt of all relevant and applicable information and documents.

Figure 4.6. Business Process of SMERA



Source : *www.smera.in*

Rating Method

SMERA is an exclusive credit rating agency for Micro, Small, and Medium Enterprises (MSME). The objectives of SMERA are: (i) conducting risk assessment, (ii) conducting SME's creditworthiness, and (iii) collect complete data of SME.

There are two different methodologies in rating an SME:

- Financial
  - Solvency Ratios: (e.g. Debt Equity)
  - Liquidity Ratios: Current Ratio
  - Profitability Ratios: RONW
  - Activity Ratios: Asset Turn Over
- Non – Financial:
  - Management Quality
  - Location Advantage
  - Marketing Network
  - Legal Issues
  - Industry and Macroeconomic Assessment

- For Manufacturing:

  SMERA rating framework considers a number of financial and non-financial parameters of the enterprise and the impact of the macro economic factors like government policies, trade policies and regulations and the industry specific dynamics. SMERA believes that the industry in which a SME operates has a direct bearing on the overall performance of the SME and therefore rates SME based on industry benchmarks. SMERA Rating is a comprehensive assessment of the enterprise taking into considerations the overall financial and non-financial performance of the subject company vis-a-vis the other peers in the industry in the same line of business and size criteria.

- For Non – Manufacturing:

  SMERA rating framework considers a number of financial and non-financial parameters of the enterprise and the impact of the macro economic factors like government policies, trade policies and regulations and the industry specific dynamics. SMERA also believes that the industry in which a SME operates has a direct bearing on the overall performance of the SME and therefore rates SME based on industry benchmarks SMERA rating is a comprehensive assessment of the enterprise taking into considerations the overall financial and non-financial performance of the subject company vis-a-vis the other peers in the industry in the same line of business and size criteria.

CHAPTER 5: SME CREDIT RATING INFRASTRUCTURE IN ASEAN

The chapter will describe results of: (i) in-depth interviews in three AMS, Philippines, Malaysia, and Thailand; (ii) focus group discussion in Indonesia, and (iii) survey in other AMS (Singapore, Brunei Darussalam, Cambodia, Vietnam, Laos PDR, and Myanmar). The description in each country will consists of findings from both secondary information and results of interviews/surveys that covers: institutional aspects, regulation, financing aspect, business process, rating methods, barriers and incentives of SME credit rating in each respective country.

5.1. Overview of Credit Rating Infrastructure for SME in AMS

There are variations in condition among AMS regarding financial infrastructure to support SME in the countries. According to SME Guidebook towards the AEC 2015 by the ASEAN Secretariat and field visits by LPEM FEUI, the following table summarizes financial infrastructure for SME in related to SME credit rating, SME scoring, and source of information for SME credit scoring/rating.

Table 5.1. SME Credit Rating and Scoring among AMS, 2014

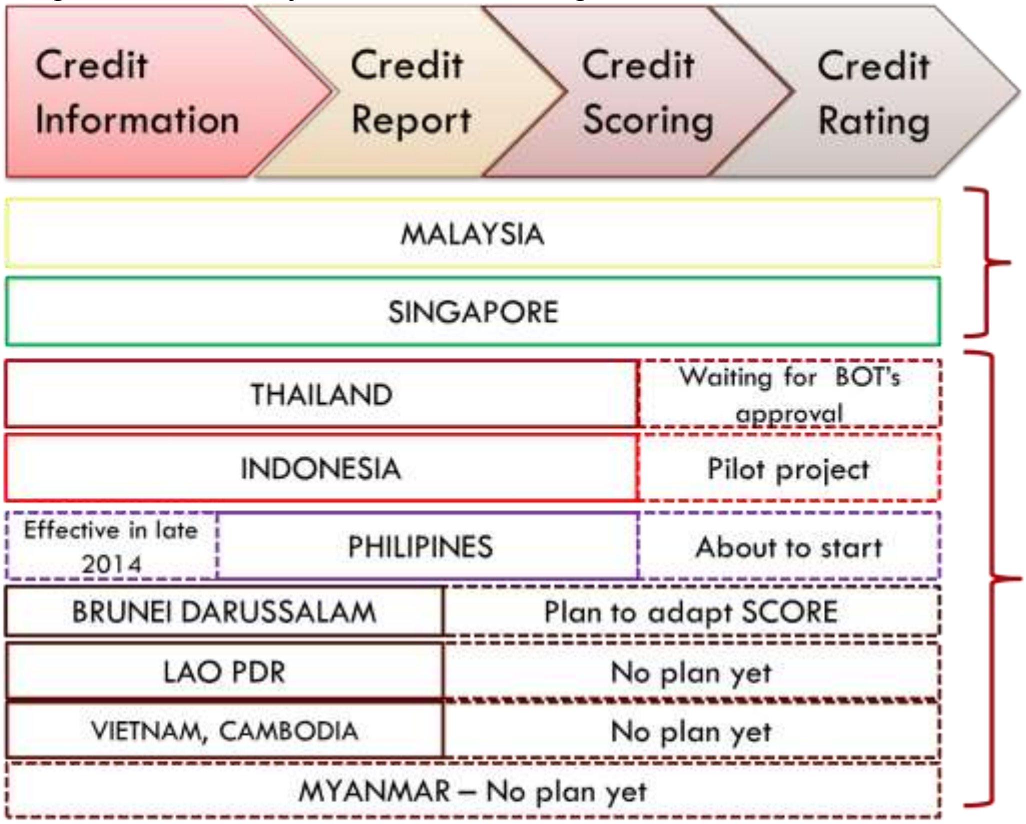
AMS	Source of Information	SME Credit Scoring	SME Credit Rating
Malaysia	Central Credit Reference Information System (CCRIS) under Bank Negara Malaysia (BNM)	▪ Credit Bureau of Malaysia (CMB) ▪ Internal banks	Credit Bureau of Malaysia (CMB)
Singapore	Credit Bureau Singapore (CBS)	▪ DP Info ▪ SICRA	▪ DP Info ▪ SICRA
Thailand	National Credit Bureau (NCB)	▪ NCB ▪ Internal banks	Under development – NCB & Thailand Credit Guarantee (TCG)
Indonesia	*Sistem Informasi Debitur* (SID) under Bank Indonesia (BI)	▪ Pilot project – Bank Indonesia (BI) ▪ Internal banks	Pilot project – Bank Indonesia
Philippines	Central Credit Centre for Information Corporation (CCIC) under Bangko Sentral ng Pilipinas (BSP)	▪ SB Corporation ▪ Banks Association of the Philippines (BAP) ▪ Internal banks	---
Vietnam	PCB Vietnam Credit Information Joint Stock Company	Internal banks	---
Brunei Darussalam	BRN – *Autoriti Monetari Brunei Darussalam* (AMBD-Credit Bureau)	Internal banks	---

AMS	Source of Information	SME Credit Scoring	SME Credit Rating
Cambodia	Credit Bureau Cambodia (CBC)	Internal banks	---
Lao PDR	Bank of Lao Credibility Index of SME (CIS)	Internal banks	---
Myanmar	---	Internal banks	---

Source: SME Guidebook towards the AEC 2015 & LPEM FEUI

Mapping of SME credit rating infrastructure can be summarised in the following figure.

Figure 5.1. Summary of SME Credit Rating Infrastructure in ASEAN, 2014



Source: LPEM FEUI, 2014

As can be seen in the figure, only two countries that already have full infrastructure of SME credit rating; which are: Singapore and Malaysia. There are three countries that have partial infrastructure and have started (or about to start) to develop SME credit rating, which are: Thailand, Indonesia, and Philippines. Other four countries that have limited infrastructure of SME credit rating, which are: Brunei Darussalam, Laos PDR, Vietnam, and Cambodia. Whereas, Myanmar is one country that has no infrastructure on SME credit rating. Details information regarding SME credit rating in each AMS are presented in the following section.

5.2. SME Credit Rating in Selected AMS (based on In-Depth Interviews and Focus Group Discussion)

5.2.1. Philippines

The first visit of the study was to the Philippines on 24th to 27th of September 2014. The in-depth interviews were conducted with following institutions:

Regulators:	Credit Rating Agencies:	Bank Association:
▪ Bangko Sentral ng Pilipinas (BSP) ▪ Bureau of Micro, Small and Medium Enterprise Development – Department of Trade and Industry (BMSMED – DTI)	▪ Phil Ratings (private credit rating agency) ▪ SBC Corp (an agency attached to DTI that provide financial support for MSME and micro finance institutions)	▪ BAP ▪ Development Bank of the Philippines (DBP)

<u>Institutional Aspects</u>

Currently, the Philippines do not have a specific credit rating institution for SME. There is one government owned agency that was specialized in SME financing in the Philippines, namely Small Business Corporation (SB Corp). SB Corp is a merger of two government agencies in 2001, the Small Business Guarantee and Finance Corporation (SBGFC) and the Guarantee Fund for Small and Medium Enterprises (GFSME). SBGFC was created in 1991 and was given a responsibility of authority to offer a wide range of financial services, specifically for small and medium enterprises engaged in manufacturing and processing, agribusiness (except crop level production) and services (except trading). These financial services include among others guarantee, direct and indirect lending, financial leasing, secondary mortgage, venture capital operations and the issuance of debt instruments for compliance with the mandatory allocation provision. It is attached to the Department of Trade and Industry and is under the policy, program and administrative supervision of the Small and Medium Enterprise Development (SMED) Council. At the time of the merger, GFSME was a guarantee fund operated independently and a corporation attached to the office of the President of the Philippines. GFSME's services were restricted to offering of guarantee services to participating financial institutions lending to SME from the time it started commercial operations in 1984. The merger of the two government financial institutions was to create a more effective financial institution better geared to meet the needs of the SME market.

SB Corporation provides financing program for SME, which are: SME wholesale lending, microfinance wholesale, direct lending to MSME and credit guarantee for MSME. In addition, SB Corp also provides capacity building for SME and financial institutions (rural banks) on business planning and financial issues and MSME compliance program. SB Corp only targeted MSME that was rejected by commercial banks (pre-bankable/non-bankable MSME). In providing the lending for SME, SB Corp applies credit scoring with borrower risk rating system.

Under Republic Act 9510 or the Credit Information System Act (CISA) which was legislated in October 2008, a centralized credit bureau, to be known as the CCIC, would be established to provide information for the local banking industry, as well as other financial institutions, in order to determine the credit worthiness of their borrowers more efficiently. CCIC will begin its operation under BSP in end 2014.

For SME lending, in 2005 BAP, association of commercial bank in the Philippines, has also developed a scoring credit method for SME that was shared among members of the BAP. The methods was endorsed to use for its members for credit risk assessment of SME with asset of PHP15 million and below. The method can be used by commercial banks on voluntary basis, in addition to banks' internal credit assessment methods. According to BAP, after applying the method, NPL of SME credit in commercial banks decreased from 15% to 2-3%.

There was one local credit rating agency in the Philippines that was interviewed in the study, Phil Ratings. The agency is currently in the process of developing SME credit rating due to request from of commercial banks and potential investors concerning rating of SME in the Philippines.

Regulation

In order to encourage SME financing, the most important SME legislation in the Philippines was the Magna Charta for Small Enterprises in January 1991 (RA 6977). The Magna Charta aimed to consolidate all government programs for the promotion and development of SME into a unified institutional framework. The Magna Charta highlighted the following provisions: (i) creation of the SMED Council to consolidate incentives available for SME; (ii) creation of the SBGFC to address SME financing needs; and (iii) allocation of credit resources to SME by mandating all lending institutions to set aside 8% of their total loan portfolio to SME (6% for small and 2% for medium enterprises). RA 6977 was amended by RA 8289 in 1997 to further strengthen the promotion and development of, and assistance to, small and medium enterprises.

Currently, regulation for credit risk rating system in the Philippines regulated by the central bank (BSP) is for banks to have an Internal Credit Risk Rating Methodology for enterprises with assets of more than PHP 15 million (BSP Circular No. 439 series of 2004). The regulation states scope of internal credit risk rating system in banks, minimum operational requirement, minimum technical standard, and timetable for implementation. The credit risk rating system for SME (enterprises with assets of PHP 15 million and less) was not yet regulated by BSP, but banks has developed their internal SME credit rating system which vary from basic to sophisticated. There is no regulation mandating the use of CRA for SME.

CRA need to be accredited by both the BSP and the Securities and Exchange Commission. There is no regulation specific to SME; instead there is one for domestic credit rating agencies for bank supervisory purposes (Circular 404) and one for Microfinance Institution Rating Agencies (Circular 685).

1) Circular 404 (19 September 2003): Rules and regulations governing the recognition and de-recognition of domestic CRA for bank supervisory purposes.
   - Ensures reliance on credit rating agencies in view of demand created by new and innovative products in the financial market.
   - Lays down the minimum eligibility criteria for recognizing a CRA:

- ❖ Organizational structure
- ❖ Resources
- ❖ Objectivity
- ❖ Independence
- ❖ Transparency
- ❖ Disclosure requirements
- ❖ Credibility
- ❖ Internal compliance procedures

- ▪ Discusses grounds and procedures for de-recognition of a CRA

2) Circular 685 (07 April 2010): Rules and regulations for the recognition and de-recognition of microfinance institution rating agencies (MIRA).
   - ▪ Creates an enabling environment for the appropriate use of objective, credible and competent third-party ratings of microfinance institutions.
   - ▪ Lays down the minimum eligibility criteria for recognizing a MIRA:
     - ❖ Organizational structure
     - ❖ Resources
     - ❖ Objectivity
     - ❖ Independence
     - ❖ Transparency
     - ❖ Disclosure requirements
     - ❖ Credibility
     - ❖ Internal compliance procedures
     - ❖ Discusses grounds and procedures for de-recognition of a MIRA

The Philippine Rating Services Corporation is so far the only domestic CRA that have been accredited by the BSP to conduct credit rating services in the country while Fitch Ratings Singapore is so far the only international CRA with a national rating. S&P, Fitch and Moody's are likewise recognized. All are private entities whose clientele include big companies.

Business Process

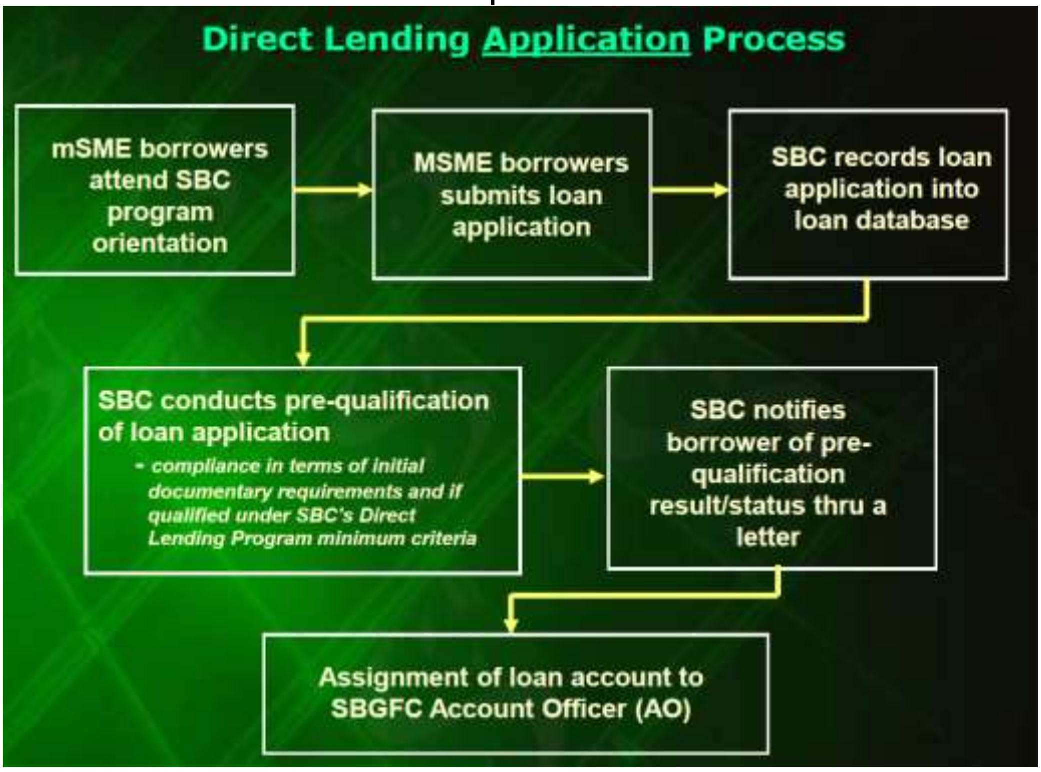
Since currently there is no SME credit rating agency in the Philippines, no further information regarding the financing, business process and rating methods. However, business process of SB Corp as a government agency specifically assigned to provide financial support for MSME can be describe here.

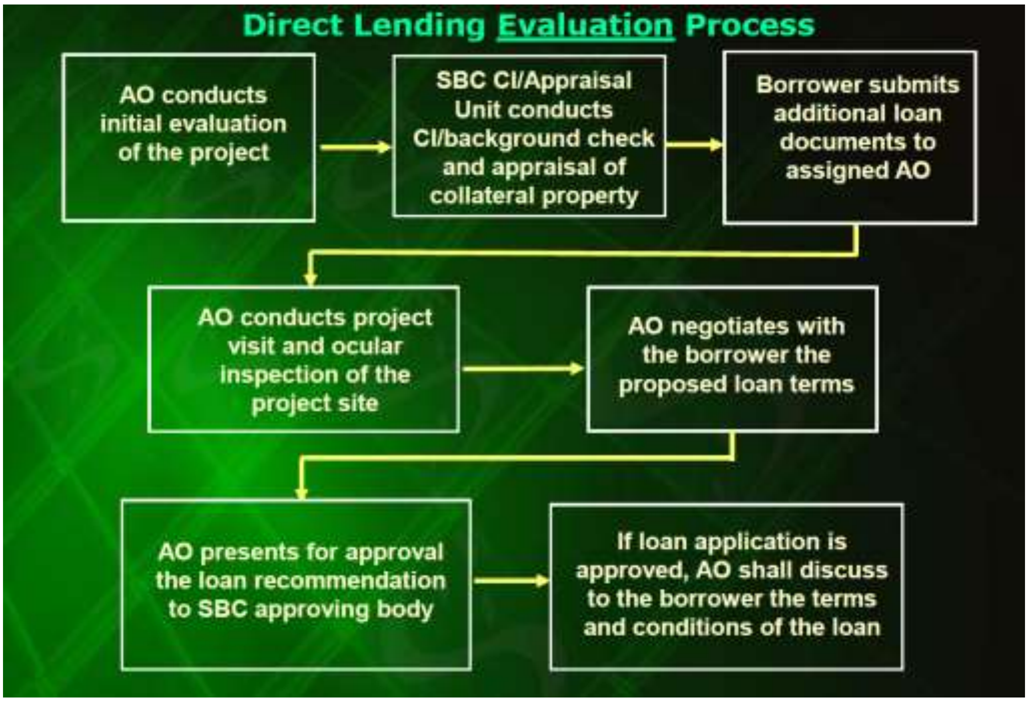
SB Corp provides a Direct Lending Program, which offers facilities designed to suit the specific financing needs of micro, small and medium enterprises (MSME). The lending programs for MSME consist of: (i) fixed asset financing, (ii) working capital financing; and (iii) financing for start-up enterprises. The MSME that are eligible for borrowing from SB Corp are:

- Filipino-owned enterprise; in the case of corporation, must be at least 60% Filipino-owned.
- Have an asset size of not less than PHP 500 Thousand and not more than PHP 100 Million, excluding the value of land.
- Have at least one year positive business track record.
- Not in the following exclusionary list of industry: real estate development, pure traders of imported goods, and engage in vice-generating operations.
- Have a Borrower Risk Rating (BRR) score of "5" or better.

According to SB Corp, in the evaluation process, a background check and field visit are needed in order to validate data and information provided by the applicant. The whole lending process takes 3 to 4 weeks, starting from submission of application to loan approval. The below figure provides application and evaluation process of direct lending program of SB Corp.

Figure 5.2. Application and Evaluation Process of Direct Lending Program of SB Corporation





Source: http://www.sbgfc.org.ph

SME Credit Rating Methods

Although currently there is no SME credit rating agency in the Philippines, credit scoring methods applied by SB Corp and BAP in the Philippines can be share here.

1) SME Credit Scoring of SB Corp

SB Corp performs a borrower risk rating (BRR) or MSME that want to borrow from SB Corp. Based on the evaluation, the MSME is rated from 1 to 10. The criteria of BRR for direct lending program of SB Corp is:

Table 5.2. Direct Lending Criteria of SB Corp

Criteria	Max. Score
Administration	20
Market	15
Production	15
Cash	50
Total Score	**100**

Source: in-depth interview with SB Corp, 2014

There is a collateral requirement in the criteria above in the forms of account receivable, inventory, or fixed assets. The availability of collateral will not assure the granting of loan and absence of collateral will not be a reason for loan rejection. Total collateral cover, however, will impact on the pricing of loan. Interest rates are tiered on the BRR, collateral cover and the term of the loan. Interest rate for one year credit line is 10.1% to 12.5%.

SB Corp also provides a financing program for bank or a non-bank intermediary that is engaged in direct lending to MSME, named wholesale lending program; and a lending program to microfinance institutions (MFIs) that have the organizational capability or strength to provide sustainable credit access to borrowers in the livelihood sector, named microfinance wholesale lending program. There are other scoring criteria for the wholesale lending program of SB Corp, which are:

Table 5.3. Wholesale Lending Criteria of SB Corp

Criteria	Max. Score
Markets	15
Administrations	20
Portfolio	50
Systems	15
Total Score	**100**

Source: in-depth interview with SB Corp, 2014

2) SME Credit Scoring of BAP

BAP develops a credit scoring criteria that can be used by its member, commercial banks in the Philippines. Hereby, the broad criteria used by BAP in its SME credit scoring:

Table 5.4. Credit Scoring Criteria of SB BAP

Criteria	Max. Score
Character and management experiences	25
Business condition	25
Financial condition and repayment habit: ➢ Experiences in dealing with formal institutions ➢ Average balance in bank ➢ Payment habit (frequency, experiences of delay, default)	25
Collateral	25
Total Score	**100**

Source: in-depth interview with BAP, 2014

<u>**Barriers and Incentives**</u>

According to resource persons in the Philippines, SME credit rating is important for risk assessment of SME for banks or SME business partners. In developing credit rating for SME, it requires reliable data (especially financial data) of SME. It is also needed to consider concerning the rating fee, since SME cannot be required to pay fee for the SME credit rating.

In developing ASEAN benchmark for SME credit rating, there are some issues that have to be considered, as follow:

- ASEAN benchmark for SME credit will be beneficial for financial institutions that want to expand business among AMS.
- The benchmark has to consider differences among AMS, such as: definitions of SME, regulations to establish businesses, characteristics of SME, different sectors of SME.

It has to be considered who want to apply the ASEAN SME credit rating model, since commercial banks already has their internal credit scoring and it is more reliable, since the banks know more about their customers. Hence, it has to consider:

- Institutions that will conduct the rating. It is important to have a reliable and trusted institution credit rating.
- Methods for the rating. There are internationally recognized and reliable methods used by international credit rating agencies.
- Reliable sources of data and information for the rating. It has to consider differences of credit data among AMS.

5.2.2. Malaysia

Second country visited in the study was Malaysia on September 30th to October 3rd, 2014. The in-depth interviews were conducted with following institutions:

Regulators:	Credit Rating Agency: Credit Bureau Malaysia	Banks:
▪ Bank Negara Malaysia ▪ SME Corporation Malaysia		▪ Alliance Bank Malaysia ▪ Maybank Malaysia ▪ SME Association of Malaysia

<u>Institutional Aspect</u>

Malaysia already has a specific institution that provides credit information and credit rating for SME, named Credit Bureau Malaysia (CBM). Currently, CBM is the only leading provider of comprehensive and credible credit information and ratings on SME in Malaysia. CBM was initiated by CGC of Malaysia to enhance SME access to financing and performs as a one stop centre for financiers and other credit grantors to retrieve credit information and ratings for credit evaluation purposes. It is a user friendly platform for SME to build their track record and credit standing to facilitate faster processing of their credit applications.

CBM was established on 3 June 2008 and began its operations on 1 July 2008. It is a joint venture between Credit Guarantee Corporation Malaysia Berhad (CGCMB), D&B Malaysia, a global provider of credit information on businesses, and The Associations of Banks in Malaysia (ABM). Ownership of each shareholder is as follows:

- CGCMB – 55%
- D&B Malaysia Sdn Bhd – 25%
- ABM Investment Sdn Bhd – 20%

CBM provides SME credit ratings and reports are available to potential financiers such as financial institutions and other credit grantors, such as multinational corporations and utility companies. The rating is a complement of internal credit assessment by commercial banks in Malaysia.

Regulation

Regulation on Credit Rating Agencies

- All CRA in Malaysia, including CBM, has to be registered by Suruhanjaya Sekuriti (Securities Commission Malaysia). Since January 2006, the Securities Commission (SC) has introduced framework on CRA in Malaysia to ensure that they upholds some principles in providing credit rating services. The regulatory requirement of CRA has been rationalized with the Capital Markets and Services Act 2007 (CMSA). Further, in 2011, the SC issued a guideline on registration of CRA.
- The government also issue an act that regulates the processing of personal data in commercial transactions by the data user/data processor (Personal Data Protection Act 2010-PDP Act) and An Act that provide for the registration and regulation of persons carrying on credit reporting businesses

(Credit Reporting Agencies Act 2010-CRA Act). The PDP Act is regulated by PDP Commissioner Office (MICC) to promote fairness, accuracy and privacy in the practice of personal data processing for commercial transactions. Whereas CRA Act is regulated by the CRA Registrar (MOF), who also issues license to eligible credit reporting agencies. CRA Act aims to promote fairness, accuracy and privacy in the practice of credit reporting business by CRA.

- There is no regulations that forces financial institutions in Malaysia to utilize credit rating, however, the Basel II and III is highly encouraged the banks to utilize external rating as complementary tools for their internal credit rating/scoring. *Institut Bank-Bank* Malaysia in cooperation with Bank Negara Malaysia, the Association of Banks in Malaysia, CGC and SME Corporation Malaysia issued a guideline to access to financing SME in Malaysia.

2) Regulation on Credit Information

Under the Central Bank of Malaysia (Bank Negara Malaysia-BNM) Act 1958, Credit Bureau in Malaysia was established and it has been in operation since 1982. The Bureau collects credit information on borrowers from lending institutions and furnishes the credit information collected back to the institutions in the form of credit report via an on-line system known as CCRIS. The Credit Bureau established by BNM under the Central Bank of Malaysia Act 2009 is responsible to administer CCRIS. CCRIS automatically processes the credit data received from the financial institutions and synthesises the information into credit reports, which can be made available to the financial institutions upon request. CCRIS can be access by all CRAs, with certain fee paid to BNM. At present, the database system contains credit information on about 9 million borrowers in Malaysia.

3) Policy coordination for SME development in Malaysia

For policy coordination of SME in Malaysia, there is one government institution under the PM office that coordinates all policies in SME, which is SME Corporation (SME Corp). One of activities of SME Corp is providing score and certificate of SME competitiveness in Malaysia, named SCORE (SME Competitiveness Rating for Enhancement). SCORE is a diagnostic tool used to rate and enhance competitiveness of SME based on their performance and capabilities. The SCORE identifies strengths and weaknesses of SME in order to recommend measures for improvements; facilitates linkages of potential SME with large companies / MNCs; and link export-ready companies. The capability and performance is measured based on seven parameters that vary across sectors. Examples of parameters for manufacturing and manufacturing related services (MRS) are:

- Business Performance;
- Financial Capability;
- Management Capability;
- Production Capacity;
- Technical Capability
- Quality System; and
- Innovation.

Financing Aspect

When first established, CBM was financially supported by the central bank (Bank Negara Malaysia-BNM), so that CBM can acquire data from the Central Credit Reference Information System (CCRIS) of BNM without a charge. Currently, CBM has to pay in order to acquire the data. The cost is covered by subscriber fee of its subscribers. There is no specific fee on the rating. A 'fee' is charged when an entity joins the bureau as a subscriber and extracts credit reports which also incorporates the credit rating. Only subscribers of the bureau are allowed to access this information.

Business Process

CBM undertakes this role by generating independent credit ratings on SME from credit and corporate business information obtained from credible sources. CBM obtains its credit information from the following data sources:

- CCRIS from Bank Negara Malaysia for current and historical data on banking information.

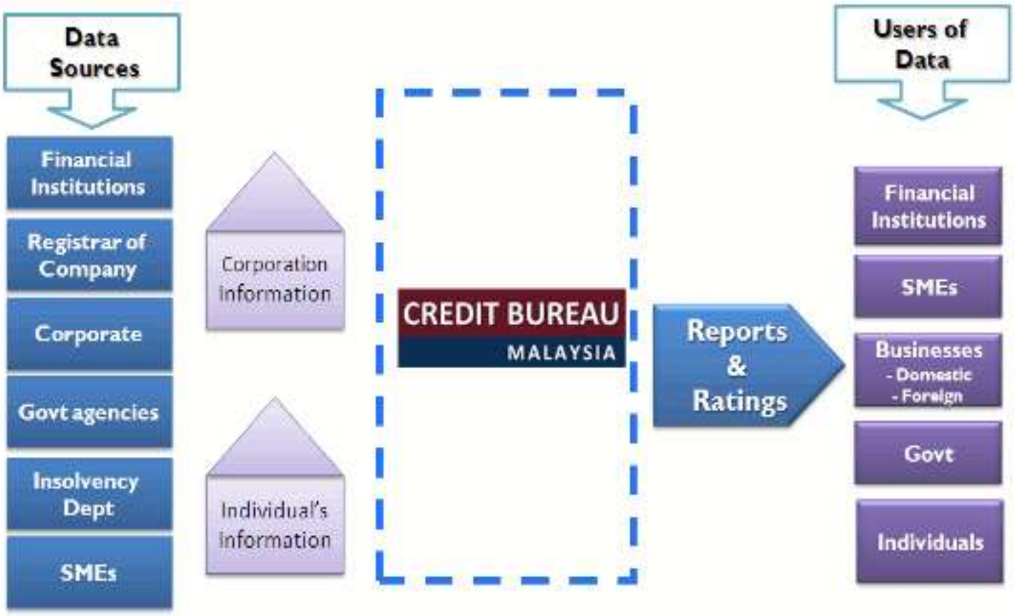
- Dishonoured Cheques information (DCHEQS) from Bank Negara Malaysia for current and historical data on dishonoured cheques.
- Suruhanjaya Syarikat Malaysia (SSMM) for data on current and historical of a company and business registry and financial information.
- Non-bank Credit Information which is provided and updated by CBM subscribers on a voluntary basis. The data collected among others are collated trade data payment from various sources like credit and leasing companies, Government Link Companies (GLCs), Telcos, utilities, etc.

CBM collects current and historical data of companies or business registry and financial information, payment track records from banking information, dis-honoured cheques as well as non-bank data information (trade payment). The data is collected regularly in real time using electronic means. There is no site visits or interview conducted for collecting the data.

Based on the above information and the Bureau's customized credit score-cards, a credit report with credit rating is produced. Subscribers of Credit Bureau Malaysia which includes Financial Institutions, Multinational Corporations, Government Agencies, Businesses and Credit Grantors. While The Bureau's reports and ratings are primarily used for credit evaluation, they may also be used by the SME to undertake a self-check. This is because The Bureau's credit ratings will identify and highlight areas that need improvement and the necessary remedial actions to be taken by SME in order to resolve their weaknesses and improve their credit standing.

A rating can only be providing in the event consent has been obtained by the data subject. CBM is regulated by the CRA act and CBM subscribers by the Personal Data Protection Act (PDP Act). Only CBM subscriber can retrieve the data. The data is stored in a secured database within specified retention period. The below figure summarizes business process of CBM.

Figure 5.3. Business Process of CBM



Source: https://www.creditbureau.com.my

CBM produces two types of credit ratings, which are:

- SME Credit Rating. SME credit rating developed by CBM is a measurement of the SME's credit worthiness. The rating model was developed by D&B specifically for the Malaysian SME environment.
- Consumer Credit Rating. The Bureau's consumer ratings named MySCoRE™ is a measurement of an individual's credit worthiness. The rating model was developed by Transunion LLC specifically for the Malaysian environment.

In applying the SME credit rating, CBM bundles the SME credit rating with credit guarantee service provided by CGC. If SME are considered feasible for banks loan, but they have limited collateral so that they want CGC to guarantee their loans, then it is required for the SME to be rated by CBM. If the SME are not rated by CBM, then the SME are not eligible for credit guarantee.

Rating Methods

CBM's quantitative method is based on SME predictive Default Probability Model that calculates the likelihood that an SME will default within the next 12 months which is using logistic regression. It is a predictive statistical model designed to complement financial institutions' credit risk management processes and assist with respect to Basel II Accord requirements. The model calculates the probability that SME being assessed will default sometime in the following 12 months and it was developed using a large pool of historical data taken from a range of data sources and represents a broad cross-section of the Malaysian SME landscape.

The Default Probability Model uses statistical probabilities to classify SME into two classifications of default risk: a Probability of Default (PD) and a Percentile ranking. The PD is a percentage figure which represents the likelihood a particular SME will default during the next 12 months. The Percentile is a value which indicates where a particular SME ranks, relative to the whole SME population in Malaysia. As default rates may fluctuate over time, the percentile provides a relative measure of an SME's risk.

To ensure model robustness, increase through-the-cycle risk estimation and prevent over-fitting of model coefficient, four separate 12—month periods between 2003 and 2007 consisting of over 400,000 active SME observation points were used as the development sample. For the model to be predictive in nature, the data making up the 12-month prediction periods was collected from two time periods known as an observation window and a performance window.

The historical information collected from the various data sources dated back as far as 1990 and beyond. The minimum amount of complete data available spanned from April 2003 to January 2008. The sample of record used to develop the model included sole proprietors, partnerships and private limited companies. Any company with known annual sales of over RM 25 million was excluded from the sample.

For SME Credit Rating, CBM only provides rating to companies with revenue less than RM 50 million (SME definition by regulation in Malaysia). The data elements available for analysis included a range of business characteristics such as:

- Age of the SME
- Age of the owners
- Number of owners
- Industry sector
- Conduct of account (up to past 60 months)
- Financial statements
- Issued capital
- Dis-honoured cheques
- Debenture charges
- Facility type
- Facility limit
- Collateral type

- Commercial trade payment history
- Capacity type

The data were grouped into a set variable with the following weight:

Table 5.5. Data Grouping of CBM

Business Scorecard		Company Scorecard	
Variables	**Weight**	**Variables**	**Weight**
Past default	20%	Past default	30%
Latest account conduct	20%	Latest account conduct	20%
Historical account conduct	15%	Historical account conduct	15%
Commercial trade payments	10%	Commercial trade payments	10%
Facility type	10%	Financials	5%
Owner's facilities	< 5%	Share capital	< 5%
Dis-honoured cheques	< 5%	Dis-honoured cheques	< 5%
Age	< 5%	Age	< 5%
Industry	< 5%	Industry	< 5%
Approved limit	< 5%	Approved limit	< 5%
Loan capacity to borrower	< 5%	Charges instruments	< 5%

Source: in-depth interview with CBM, 2014

Barriers and Incentives

The SME credit rating empowers SME to build their credit reputation from a wide range of transaction behaviours. These include transactions with suppliers, customers, and others. The record of transaction behaviour expected to provide comprehensive information on the SME, especially for SME that are accessing financing from the banking sector for the first time.

CBM uses a credit methodology that discounts aged information thus providing a fairer assessment of the SME current credit worthiness. This will facilitate the efficient processing of the loan applications and also allows SME to secure more favourable financing terms from financial institutions.

The information from CBM will also expedite the assessment of developments in new markets and the creation of a liquid secondary market which would in turn increase the availability of funds to SME.

In giving credit to SME, commercials banks in Malaysia have individual SME credit scoring methods, procedure, and database. The credit scoring includes quantitative and qualitative methods. Especially for SME it is important for the banks to know their customers and have face-to-face meetings with the customers. The SME credit rating from CBM in Malaysia is considered as a complement of the bank scoring methods. The reliability of data, institution, and methodology are considered important by the banks, so that they are willing to subscribe and use SME credit rating and information from CBM.

There are things that have to be considered in developing ASEAN benchmark for SME credit rating:

- Differences among AMS, such as: definitions of SME, regulations to establish businesses, characteristics of SME.
- Who are the targets to be rated? Is it for small-medium enterprises or micro enterprises (that are usually are non-bankable)?
- Which institutions will conduct the rating? It is important to have a reliable and trusted institution credit rating.
- What methods will be applied in conducting the rating? There are internationally recognized and reliable methods
- The rating requires reliable sources of data and information. It has to consider differences of credit data among AMS
- For the countries that already has its own SME credit rating (such as Malaysia), the ASEAN benchmark can be relative lower compare to the standard in Malaysia. Hence, the use will be more for financial institutions in Malaysia that want to wide its market to ASEAN market.

5.2.3. Thailand

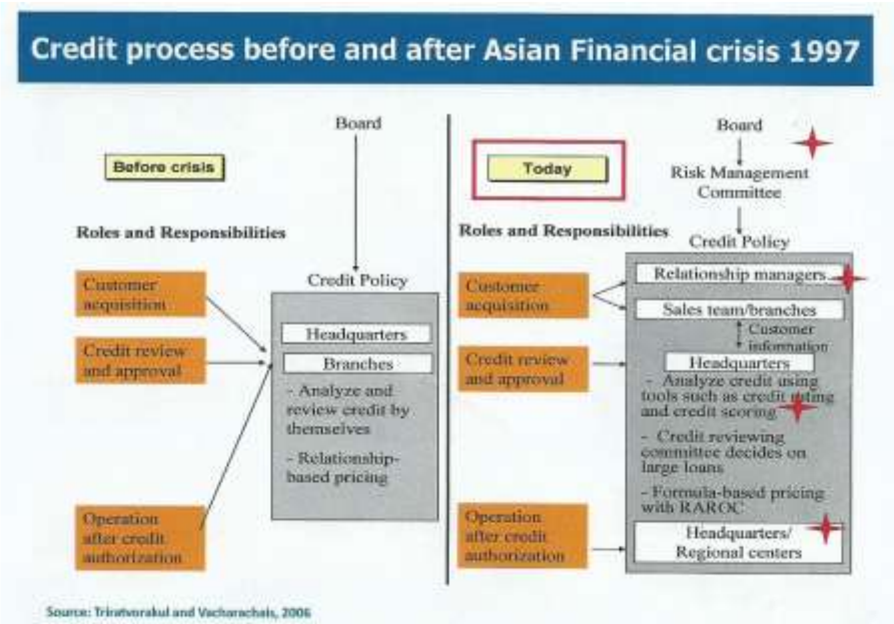
The last country visited in the study was Thailand on October, 8th – 11th, 2014. The in-depth interviews were conducted with following institutions:

Regulators:	Credit Rating Agencies:	Banks:
▪ Office of SME Promotion (OSMEP) ▪ Fiscal Policy Office Ministry of Finance	▪ National Credit Bureau ▪ Thai Credit Guarantee Corporation	▪ SME Bank ▪ Thai Bankers Association

Institutional Aspects

Thailand has not yet established a credit rating specifically for SME. However, Thailand has a Credit Bureau, named NCB and CGC, named TGC. Prior to the Asian financial crisis in 1997/98, lending process from banks in Thailand were mostly conducted in banks' branches and using relationship-based pricing. After the financial crisis, banks' branches and headquarter share customer information, and credit is analysed using tools such as credit rating and credit scoring. Hence, credit rating and scoring is an important tool for credit process in Thailand. In general, the credit process in Thailand, before and after financial crisis in 1997/98 is presented in the following figure.

Figure 5.4. Credit Process in Thailand, Before and After Financial Crisis 1997/1998



Source: "Household and SME Debt in Credit Bureau's View", presentation material of NCB, October 9th, 2014

In 1999 after Asian financial crisis, Bank of Thailand and Thai Banker's Association (consists of 13 Thailand commercial banks) established Central Information Services as a centre for gathering loan data from financial institute members. It offers credit data of both consumer credit data and commercial credit data to be the source of data for financial institutes to use for analysing the loans. In 2000, it was changed into Central Credit Information Services (CCIS), and later in 2005 was merged with Thai Credit Bureau into NCB. The composition of shareholders of NCB is as follows:

- Thai commercial banks hold the same portion of the shares with total of 24.5%
- Business Online PCL and TransUnion hold the same portion of 12.25% with total of 24.5%
- Thailand Credit Data Co, Ltd holds 30% (Government Housing Bank 15% and PCC Capital 15%)
- Government financial institutions hold 21% (Government Saving Bank 9%, Dhipaya Insurance PCL 6% and SME Development Bank of Thailand 6%)

The objectives of NCB is to develop the systems of processing and reporting credit data more update and efficiently, and to publicize to make people have knowledge and understanding about the credit data as well as the roles of the company. Currently, service of NCB is to provide credit data reporting systems, which are:

- Consumer Credit Reporting System developed by Trans Union International Co., Ltd.
- Commercial Credit Reporting System developed by Dun & Bradstreet Co., Ltd.

In 2000, Thailand also has established a credit guarantee company, TCG to provide support to SME through guarantee service for the SME that have potentials but lack collateral security in order to enable them to acquire the required amounts of loans from financial institutions. It is a state-owned specialized financial institution under the supervision of the Ministry of Finance (MoF). The objectives of TCG are:

- To assist small enterprises in obtaining a greater amount of credit from financial institutions.
- To strengthen the confidence of financial institutions in providing credits to small enterprises
- To accelerate the credit extension to small enterprises throughout the century.
- To assist in the achievement of the small industry development target under the National Economic and Social Development Plant.

Currently, TCG is developing a credit scoring model in order to select SME to be guaranteed, after selected by banks. The scoring model consists of company and personal scoring model.

In addition, there are one local rating agency in Thailand, TRIS Rating owned by government (18.52%), private sector (76.48%), and international agency (5%). TRIS Rating is a credit rating agency that caters large corporate. There is no indication that TRIS Rating has done rating for SME. It aims to promote the development of Thailand's debt market.

Regulation

There is no specific regulation related to development of SME credit rating in Thailand. With regards to credit information services provided by NCB, there is a regulation Credit Information Business Act, which regulate business relating to the control or processing of credit information in order to provide credit information, to the members of or recipients of the service (B.E 2545 renewed by B.E. 2549 and further by B.E. 2551 in 2008).

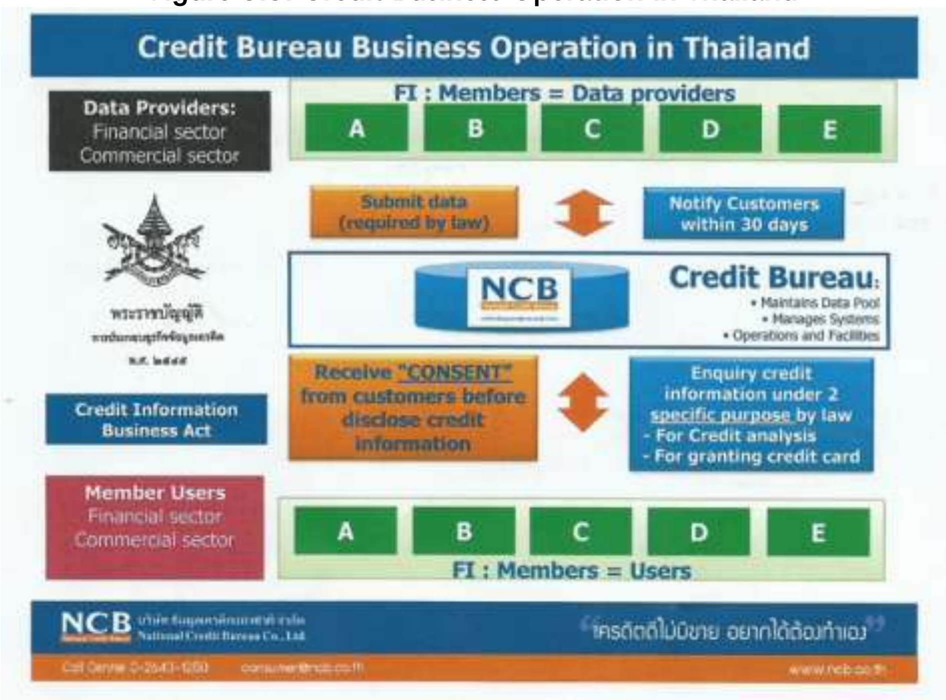
For SME policy coordination, Thailand has just restructured a unit under the PM Office, namely Office of Small and Medium Enterprises Promotion (OSMEP) that is assigned as a coordinator of all government policies for SME. OSMEP has issued a white paper on Small Medium Enterprises of Thailand in 2014 that provides comprehensive information regarding current condition and SME strategic and action plan in Thailand.

Business Process

Since currently there is no SME credit rating agency in Thailand, no further information regarding the financing, business process and rating methods. However, business process of NCB as a credit information report agency can be described here.

Data providers are financial sector and commercial sector. Members of NCB submit financial loan agreement data to NCB, which is required by Law. NCB then maintains data pool, manages systems, performs operations, and provides facilities for its members. NCB then provides services to its member in term of: consumer credit report, commercial credit report, credit review, credit characteristic, industry report, etc. According to Credit Information Business Act of Thailand, in order for NCB to disclose credit information, there must be consent from each customer. Enquiry of credit information is allowed on two specific purposes, which are for credit analysis and granting credit card. NCB collects data on credit information from financial loan agreement only. It neither collects utility payment nor telephone numbers of borrowers. The NCB business operation is summarized as follows.

Figure 5.5. Credit Business Operation in Thailand



Source: "Household and SME Debt in Credit Bureau's View", presentation material of NCB, October 9th, 2014

Currently, NCB has 81 members which consist of commercial banks and other non-bank financial institutions. Its members apply the information from NCB as a complementary to their internal credit assessment. Source of fund of NCB is from subscriber fee charged to its members.

NCB is currently developing SME credit rating (in collaboration with FICO SME Score) and consumer credit score (in collaboration with TransUnion), and still waiting for approval of Bank of Thailand. The model for consumer credit score is developed in one year in cooperation with TransUnion, whereas model for SME score is developed in two years in cooperation with FICO. NCB is currently waiting for approval from Bank of Thailand, so that the credit rating services can be launched.

Rating Methods

The rating methods applied by NCB in developing FICO SME Score cannot be described here, since the service has not been launched yet. However, TCG as a credit guarantee company in Thailand, is currently also developing credit scoring model for SME (for personal and corporate model) in order to analyse credit risk and determine level of credit guarantee. The SME scoring model of TCG consists of several criteria as follows:

Table 5.6. Scoring Criteria of TCG

TCG SME Credit Scoring - Corporate	TCG SME Credit Scoring – Personal
▪ Collateral ▪ Ratio of year debt to total loan ▪ Experiences of management team ▪ Age of company ▪ Business sector	▪ Collateral ▪ Ratio of year debt to total loan ▪ Marital status ▪ Education ▪ Age of manager ▪ Ratio of cash collateral to total collateral ▪ Total asset ▪ Personal guarantee

Source: in-depth interview with TCG, 2014

Barriers and Incentives

According to interviews in Thailand, there are many benefits of SME credit rating, such as:

- Allow banks to expand their credit to SME.
- Reduce credit risk for SME lending, and hence reduce cost for SME lending.
- The SME credit rating can support government program to increase financial access of SME.
- SME can access lending from banks.

However, there is a condition that hindered the development of SME credit rating, which is the availability of accurate financial information from SME.

There are some issues that have to be considered in developing ASEAN benchmark for SME credit rating:

- ASEAN benchmark of SME credit rating is a good tool to overcome asymmetric information between SME and financial institutions among AMS, especially when we are facing AEC in 2015. However, there are some differences among AMS that have to be taken into account, such as: definitions of SME, regulations to establish businesses, characteristics of SME, cultural differences.
- What is the purpose of SME credit rating? Is it for loan approval or for pricing?
- Who are the targets to be rated? Is it for SME or micro enterprises (that are usually are non-bankable and the ones that cannot get financing access to banks)?
- Which institutions will conduct the rating? It is important to have a reliable and trusted institution credit rating.
- What methods will be applied in conducting the rating? There are internationally recognized and reliable methods.
- The rating requires reliable sources of data and information. It has to consider differences of credit data among AMS.
- The ASEAN SME credit rating should only provide broad guidelines for financial institutions regarding credit risk of SME in ASEAN.

- In some AMS, commercial banks has developed adequate tools for accessing credit for SME, hence, the ASEAN rating has to be well developed so that it can complement the credit scoring tools of the banks.

The AMS that will get most benefits of ASEAN SME credit rating are the ones that have not developed SME credit scoring/rating methods.

5.2.4. Indonesia

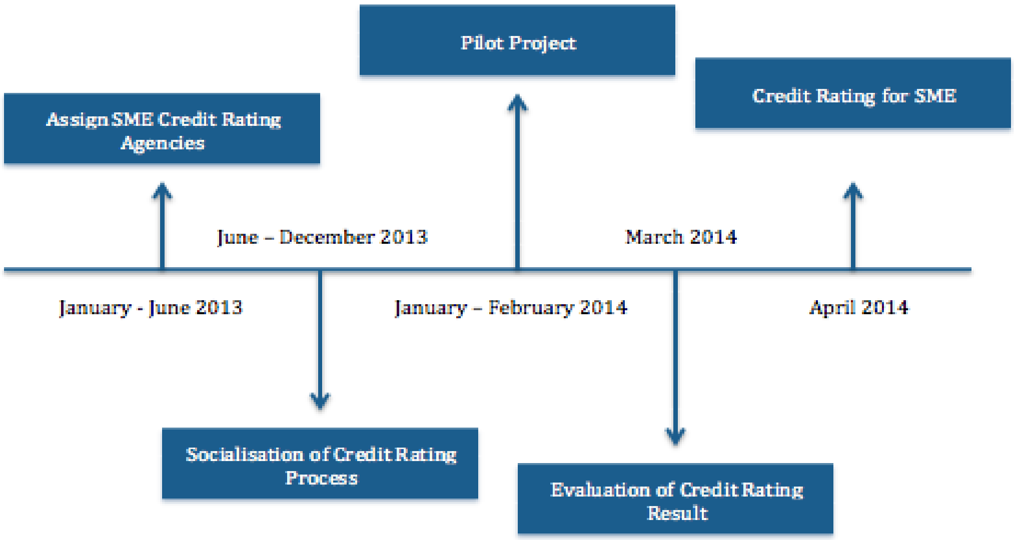
Information on the credit rating methods for SME in Indonesia was gathered from a focus group discussion (FGD) conducted by Bank Indonesia in Jakarta on November 3rd, 2014 and studies conducted by Bank Indonesia during period of 2009 to 2012. Participants of FGD consisted of:

Regulators:	Credit Rating Agencies& Credit Guarantee Agencies :	Banks:
▪ Bank Indonesia ▪ Ministry of SME and Cooperation	▪ PT. Pefindo ▪ PT. ICRA Indonesia ▪ D&B Indonesia ▪ Yayasan MICRA ▪ PT. Jamkrindo ▪ PT. Askrindo	▪ BRI ▪ Bank Mandiri ▪ Bank CIMB Niaga ▪ Bank Danamon

<u>Institutional Aspect</u>

Indonesia do not have a specific credit rating agency for SME yet. Starting in 2009, under coordination of Bank Indonesia, Indonesia has conducted studies concerning credit rating for SME in Indonesia. In 2009, Bank Indonesia conducted study regarding requirement for SME credit rating, followed by a study on feasibility of establishment of SME credit rating in Indonesia in 2011, and study on pilot project of SME credit rating in Indonesia in 2012. According to the studies, roadmap of establishment of SME credit rating in Indonesia is presented as follows.

Figure 5.6. Roadmap of SME Credit Rating in Indonesia



Source: Bank Indonesia, 2011

Bank Indonesia has conducted a pilot project of SME credit rating with the existing credit rating agencies in Indonesia, namely: PT. Pefindo, PT ICRA Indonesia, Yayasan MICRA (for micro financial institutions), and D&B Indonesia. PT Pefindo and PT ICRA Indonesia are the two credit rating agencies in Indonesia that have a plan to expand their business to rate SME in Indonesia.

Regulations

There are no specific regulations yet regarding SME credit rating in Indonesia. Specific regulations for SME credit rating agencies are important, so that the credit rating agencies can be credible and accredited by financial authority. Establishment of credit rating agencies and credit bureaus in Indonesia is currently under the Financial Services Authority (OJK-*Otoritas Jasa Keuangan*). In August 2014, there were two institutions have applied to OJK to establish a credit bureau in Indonesia. The credit bureau will provide credit information not specifically for SME for both banks and for non-bank financial institutions.

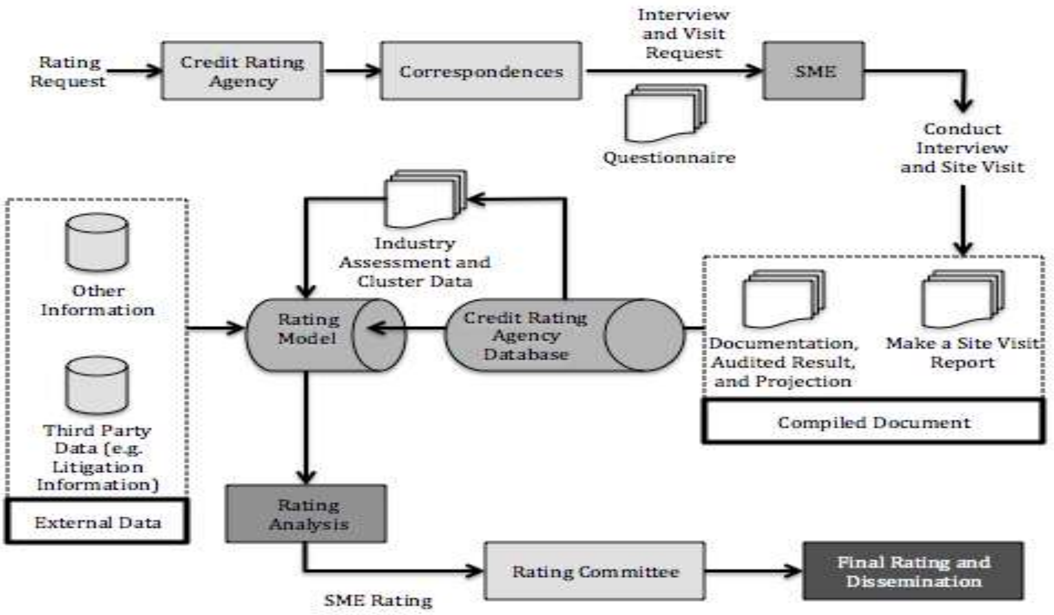
Bank Indonesia issued a regulation for bank regarding minimum percentage of credit for SME to total credit of banks (Regulation of Bank Indonesia – PBI No. 14/22/PBI/2012). In 2018, commercial banks in Indonesia have to allocate minimum

20% of their credit portfolio for MSME. Credit rating for SME is one instrument to facilitate banks in providing credit for SME in Indonesia.

Business Process

As in the study of Bank Indonesia (2011), the business process of SME credit rating is proposed with reference to business process of credit rating SMERA India. The proposed business process of SME credit rating in Indonesia is presented in the following figure.

Figure 5.7. Proposed Business Process of SME Credit Rating in Indonesia



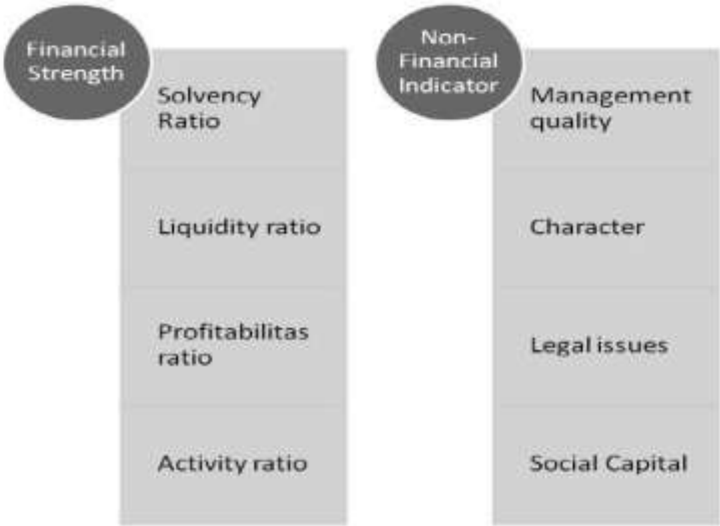
Source: Bank Indonesia, 2011

A crucial issue regarding the business process is the timing in providing SME credit rating. In determining credit for SME, some banks in require 3-5 days, hence, it is expected that SME credit rating will not prolong the time of credit process. However, according to PT. Pefindo, in conducting SME credit rating, field visits to the respective SME are required. With the field visits, it will take 1-2 weeks to provide SME credit rating, which is considered too long by banks.

SME Rating Methods

As in the study of Bank Indonesia (2011 and 2012), the rating methods of SME are based on a proposed approach in the studies. The study of Bank Indonesia in 2011, proposes two main indicators for SME credit rating, which are: financial strength and non-financial indicator as in the following figure.

Figure 5.8. Proposed Indicators for SME Credit Rating in Indonesia



Source: Bank Indonesia, 2011

In the pilot project in 2012, Bank Indonesia proposed a weight using judgment of expert in AHP approach. The criteria of SME credit rating methods consist of management aspect, business aspect, and financial aspect. The proposed parameters and weights are presented below.

Table 5.7. Proposed Criteria and Weights for SME Credit Rating Methods in Indonesia

Criteria	Max. Score
Management aspect	44%
Financial aspect	35%
- Capacity	15%
- Collateral	11%
- Capital	9%
Business aspect	21%
Total	**100%**

Source: Bank Indonesia, 2012

The method used will be a probability default model. However, the model will require adequate data, so that it can apply statistical approach for analysis. Support data from Bank Indonesia is based on credit information data in Bank Indonesia SID. The proposed method is only for SME credit rating, excluding micro enterprises. Micro enterprises have different characteristic compare to SME, so that it requires different rating criteria and method.

Indonesia has adequate resources to develop SME credit rating methods; however, if necessary to assure credibility of the methods, cooperates with existing international credit rating agencies is possible.

Based on discussion in the FGD, it was suggested that the rating is set differently among sectors. For example, rating for agriculture sectors should be different with rating for mining sectors. The method should allow adjustment based on sector of SME.

The SME credit rating, especially in Indonesia, has to take into account disparities among regions in Indonesia. In conducting the rating in Indonesia, credit rating agency should have prior knowledge and information regarding local characteristics, so that the rating can be applied for all SME in Indonesia. The SME credit rating should not only covers cities, but also remote areas in Indonesia.

<u>Barriers and Incentives</u>

1) Banks

- Banks seem to be reluctant in using the SME credit rating, since they already have adequate internal credit mechanism. Banks basically apply internal credit scoring by applying 5 Cs of credit (capacity, capital, collateral, conditions, and character). The use of internal credit methods of banks should be supported by aspects of governance, risk, and control, which most of big bank already applied it.
- Most of major banks in Indonesia already have internal credit mechanism and risk management framework. However, some small and medium banks, regional banks might not have such mechanism. The SME credit rating can be an instrument for a risk management framework for those banks. In addition, for banks that do not have adequate resources to properly assess SME for lending; the use of SME credit rating can overcome the problem.

- It is proposed that SME credit rating as a supporting of internal credit mechanism of banks. The SME credit rating mechanism can also be applied as lending standard in banks. In order to give credit to SME, information of SME credit rating is required prior to internal credit assessment of banks.
- The SME credit rating is not a parameter for banks in determining cost of finance and size of lending. The interest rate and size of lending depends of risk appetite of the banks.
- Concerns of banks in applying the SME credit rating is credibility of credit rating agency, sources of information, validity of data, time to process the rating, and rating fee. Government can provide incentive by subsidizing the rating fee.

2) SME and SME credit rating mechanism

- The guideline for SME credit rating should state eligible SME to be rated. Does it include un-bankable or bankable SME? If the goal of the rating is financial inclusion, then the rating should be aimed for un-bankable SME
- SME credit rating will provide more information to lenders concerning lending risk to SME. Due to asymmetric information, most banks consider that lending to SME is very risky; hence, they allocate limited lending to SME.
- Most lenders (banks or non-banks financial institutions) are willing to provide credit to SME due to high return interest rate and spread of deposit rate and lending rate. By applying SME credit rating, the lending rate will be decreased, and there is a possibility that financial institutions do not consider SME lending as a lucrative business, and hence decrease lending to SME. This can be a self-defeating condition for SME.
- SME needs to enhance their capacity so that they can meet credit requirement by banks. Basic information regarding financial report is needed in order to be eligible for SME to be bankable.
- If SME credit rating is applied, after an SME is rated, is there any guarantee that banks or other financial institutions will provide lending to the SME? It

should be considered a mechanism, so that SME credit rating is used as a parameter to provide credit for SME.

- It is not possible to apply the same standard of SME and SME credit rating among AMS, since all AMS have different characteristic. The most possible way it to provide a comparable minimum guiding principles.

3) Other institution: credit guarantee agency

- Other potential users of SME credit rating is credit guarantee agency. In order to guaranteed by the agency, SME have to be rated by the credit rating agency.
- Credit rating agencies in Indonesia supports the establishment of SME credit rating. They consider that the guarantee process can be fastened if there is information of the SME from credit rating agencies.

5.3. SME Credit Rating in Other AMS (based on Survey)

Participants of the survey came from six ASEAN countries those are: Singapore, Brunei Darussalam, Vietnam, Cambodia, Lao PDR and Myanmar. The country is represented by four institutions with at least one participant for each institution. Twenty four questionnaires sent to those institutions with currently fifteen replies are received. Brunei and Lao PDR are two countries with the complete set of questionnaires feedback received.

5.3.1. Singapore

The information presented here is based on the filled questionnaires of DP Information Group Credit Rating Agency, the Association of Banks in Singapore and SPRING Singapore from the SME perspectives.

<u>General Information and Institutional Aspect</u>

DP Information is an established credit rating agency in Singapore and a private owned company that conducts SME credit rating in Singapore, whereas, the Association of Banks in Singapore-ABS is the one that uses the credit rating report. The purpose of SME Credit Rating in Singapore are follows:

- For financial institutions to better understand risk profile of SME.
- For government to better understand profile of SME and formulate policy for SME.
- For businesses to better understand businesses and industries of SME.

Users of the rating mostly are banks or financial institutions, SME, and government. Although there is no specific government regulations regarding the use of SME credit rating, such as regulation on incentives for using SME credit rating and regulation that require bank to use the SME credit rating, some government institutions in Singapore (in education and infrastructure) require all companies participated in the government tender to acquire the CRA (DP) rating in order to be eligible for the tender. This regulation is enforced to ensure reliability and sustainability of the companies participated in the government tender.

SME Financing

According to the respondents, major issues faced by SME in Singapore regarding to credit and banking needs are: collaterals and pricing. The alternative sources of funding are: personal funding, non-bank financial institutions (e.g. pawnshop, factoring, angel investor, venture capital), and the government. There are 180,000 SME in Singapore, and around 7 out of in 10 workers in Singapore works in SME, which contributes to 50% of Singapore GDP.

The characteristics of loan products for SME cover a broad range of business banking products ranging from short term working capital financing such as trade, factoring, business overdrafts to longer term asset based financing covering commercial property, machinery and equipment. The terms of each product differ depending on tenor, loan size, loan purpose and level of collateral provided (if any).

In Singapore, there are also various government loan schemes such as Local Enterprise Finance Scheme, Micro Loan Programme, Loan Insurance Scheme and Internationalization Finance Scheme. The product terms are broadly defined under each scheme and standardized across financial institutions participating in the schemes.

There are broadly two categories of collateral acceptable by banks in Singapore:

- Physical assets – e.g. Properties/real estate and business assets such as machinery and equipment.
- Financial assets - e.g. Cash deposits, standby letters of credit, bankers guarantee and marketable securities.

Some banks also require the personal guarantee of the key promoters or directors. If the obligor is part of a group of operating entities, the bank may also require the corporate guarantee of the entity with the main operating cash flow.

The SME loan performance in Singapore depends on market environment, risk based pricing and product type, and gross interest rate varies. The average net interest margin in Singapore is about 1.64% in 2013, and the average NPL is 1%.

Analysis of SME credit is conducted by banks in Singapore with credit underwriting for small business and it is managed on a portfolio basis through credit programme with defined target markets and terms of lending. Scoring models are also used in credit decision process to enable an objective, consistent and efficient decision making process. The probability of default is one factor considered in the banks' credit underwriting framework.

Loans to medium enterprises are individually assessed and approved. The credit assessment is guided by a defined target market, risk acceptance criteria and takes into consideration factors such as management quality, financial performance and industry outlook.

Assessment of SME loan risk is guided by the relevant regulatory requirements on credit grading and loan impairment. Generally, banks consider a borrower to be in default when they are unlikely to repay its credit obligations in full or when the borrower is past due for more than 90 days on its credit obligation.

Rating Financing Aspects

The SME credit rating is a subscription-based model. The fee is ranged from SGD50 to SGD300, depends on information subscribed by the users. The fee is paid by the SME, regulators, financial institutions that provide loan to SME, and SME's business partners.

Business Process

The request of SME credit rating is mostly initiated by SME, SME's business partners, financial institutions, and regulators (Central Bank, Financial Service Authorities). The rating procedure is started from a request order to DP by filling an order form, and then after the order form is completed, a payment is made to DP. DP will generate requested credit rating report after the payment.

Data and information for SME credit rating is presented in the following table.

Table 5.8. Data Requirement of DP Information

Type of Data	Sources of Data	Methods of Data Collection
Financial Data	Financial Statements	From the client or DP's database.
Registered Data	Business Registration Document	From DP's database.
Litigation Information	Litigation Reports	From DP's database.

The data is stored in appropriate servers within DP and manage by an IT team. This data is accessible for clients that ordered the credit rating services.

Rating Methods

In developing SME credit rating, there are some variables applied by DP which are: company structures and ownerships, historical loan, historical business performance, key financial ratios, business plan, and other litigation related information. In general, the methods used for SME credit rating are the same to those used for corporate credit rating.

DP develops a credit rating model which is an adaptation from Altman Z-Score model. The model is in line with the one proposed by Professor Stephen Hilligeist of Northwestern University, USA by using logit regression. The model was developed on by applying over 7,000 audited financial statements between the period of 1996 to 2000, and across various industries in Singapore. DP Credit Rating produces probability predictions of corporate entities by taking into account of the following 6 broad categories of risk: Profitability, Capital Structure, Liquidity, Activity, Growth, and Size.

Final output of DP credit rating process is a credit rating report. Companies are rated on a scale of DP1-DP8, where DP1 denotes the lowest probability of default, and DP8 indicates the highest probability of default. Companies with rating "DP1 – DP4-" are companies with investment grade quality, companies with rating "DP5+ to DP6-" are the ones with high yield grades, and companies that fall under "DP7+" to "DP8" are considered to be high-risk.

Barriers and Incentives

Regarding barriers and incentives, the respondents presumed that the SME credit rating will be beneficial for financial institutions to understand risk profile of SME in order to have better targeted for SME loan, to develop track record, and to support financial access for SME. In addition, the rating can assist self-evaluation of SME, so that SME can gain confidence, enhance international network, and at the same time lower the cost of rating.

The presumed barriers of SME credit rating are difficulties to obtain reliable data and information of SME, lack of regulation from government to use SME credit rating, limited access to financial information, transparency and standardized reports of SME, and awareness of SME and other potential users regarding the value of credit rating.

According to the respondents from Singapore, the ASEAN benchmark for SME's credit rating will make the rating reliable and standardized, so that conditions and risks among ASEAN SME can be compared and hence increase loan access for SME in domestic and regional level. Whereas, the barriers of this benchmarking are there is no standardized reports, heterogeneity in SME conditions, limited access to financial information and transparency, and limited support of fund. SPRING concerns regarding different stage of maturity of financial sectors in ASEAN countries that can also hinder the benchmarking. Additional point raised by DP related to role of government to highlight the value of credit ratings to the business community and encourage them to use it.

5.3.2. Brunei Darussalam

The information presented here is based on the filled questionnaires from: (i) Entrepreneurial Development Centre, Ministry of Industry & Primary Resources (EDC) as a regulator; (ii) *Autoriti Monetari* Brunei Darussalam-Credit Bureau (AMDB-CB); (iii) Bank Islam Brunei Darussalam as a user; (iv) Brunei Darussalam International Chambers of Commerce and Industry (ICCI); and (v) Young entrepreneurs Association Brunei (YEAB/KFC) as SME's representatives.

General Information and Institutional Aspect

EDC in Brunei has not conducting SME credit rating, however, they have planned to conduct SME rating in order to measure competitiveness of SME in Brunei. They intend to apply the concept of SCORE System, as implemented by SME Corp, Malaysia. With this rating system, they presume that they would be able to rate SME in Brunei according to what level or category they are in and whether they are acceptable to receive the SME loans or not.

The same as EDC, AMDB-CB in Brunei has either conducted SME credit rating, however, they plan to conduct a feasibility study to introduce credit scoring and credit rating of SME in the future. The respondents perceived that SME credit rating in ASEAN will be beneficial for them.

Since there is no SME credit rating yet in the country, there is a need of SME credit rating agency in the country to ease evaluation process SME financing application, to identify credit capability of the company, and to standardize the financing process.

SME Financing

Major issues faced by SME on credit and banking needs in Brunei are: collaterals, time to process, and pricing. Whereas, alternative sources of funding are: personal funding, non-bank financial institutions (e.g. pawnshop, factoring, angel investor, venture capital), and the government. In Brunei, SME contributes significantly to employment and the GDP. Most SME tend to be non-limited companies as they are not subjected to income tax.

There are several loan products especially for SME in Brunei, such as:

- Microcredit Financing Scheme; with Profit Rate: 4% ARB, Repayment Term: 5 Years (maximum), Grace Period: 12 Months (maximum), Financing Size: Bnd50,000.00 (maximum), Collateral: Collateral Value not Less than 25% of Financing Applied
- Entrepreneur Financing Scheme; with Profit Rate: 4% ARB, Repayment Term: 10 Years (Maximum), Grace Period: 12 Months (Maximum), Financing Size: Bnd5,000,000.00 (Maximum), Collateral: Collateral Value not Less than 25% of Financing Applied
- Export Refinancing Scheme; with Profit Rate: 4% ARB, Repayment Term: Pre-Shipment Ers–1 Month before the Letter of Credit Expired, Post-Shipment Ers–Maximum of Three (3) Months, Financing Size: Bnd50,000.00 – Bnd500,000.00, Collateral : Letter of Credit (Original) adopted by bank, and purchase order.

Currently, bank conducts analysis of SME credit by applying 5Cs and SWOT. SME's loan risk is managed by financial risk assessment and by requesting collateral to secure the loan.

Barriers and Incentives

Regarding barriers and incentives on credit rating for ASEAN SME, the respondents presumed that the SME credit rating will be beneficial for financial institutions, SME itself, SME's business partners and public sectors (government agencies). Benefits of the rating in ASEAN, among others are: better understanding risk profile of SME, developing track record of SME, and supporting financial access for SME. This rating will also assist self-evaluation of SME, and hence will increase confidence of SME, enhance SME international network, and at the same time lower the cost of rating.

The presumed barriers of SME credit rating are difficulties to obtain reliable data and information of SME, lack of regulation from government to use SME credit rating, limited access to financial information, transparency and standardized reports of SME, and awareness of SME and other potential users regarding the value of credit rating.

According to the respondents from Brunei, the ASEAN benchmark for SME's credit rating will make the rating reliable and standardized, so that conditions and risks among ASEAN SME can be compared and hence increase loan access for SME in domestic and regional level. Whereas, the barriers of this benchmarking are there is no standardized reports, heterogeneity in SME conditions, limited access to financial information and transparency, and limited support of fund.

Additional point rose by EDC is that when SME applied for loans, they can be assessed based on their track records that the bank and the government have recorded. Another point raised by ICCI is that since currently there is no credit rating system in Brunei Darussalam, there is insufficient information to firstly develop the rating. Hence, the credit rating system will be subjective and perhaps not totally reliable. Unless the reporting system of SME is improved and become more transparent, then the credit rating may be useful.

Furthermore, ICCI perceived that the SME credit rating benchmarking in ASEAN study will be beneficial. However, it is difficult to develop a reliable SME credit rating, since majority of SME's are either sole proprietorships or partnerships which are not subjected to tax, and there are no requirements for SME to file financial statements.

5.3.3. Vietnam

The information presented here is based on the filled a questionnaire of Vietnam Credit Information Joint Stock Company (PCB) and Vietnam Academy of Social Science. There was no response of the questionnaires sent to the State Bank of Vietnam as regulator and Vietnam Banks Association (VNBA) as user.

General Information and Institutional Aspect

Vietnam Credit Information Joint Stock Company is a joint venture institution in Vietnam that focus on the development of a credit bureau score (combination of behavioural score and generic application scorecard). The institutions has not conducted SME credit rating yet, nor has plan to conduct it in the near future.

SME Financing

SME in Vietnam are defined based on asset and number of workers. SME account for 97% of enterprises number, while contribute to more than 80% of employment. SME in Vietnam faces major issues on credit and banking requirements, and detailed financial report. SME can get alternative sources of funding from non-bank financial institutions (e.g. pawnshop, factoring, angel investor, venture capital); and government funding.

Barriers and Incentives

Currently, there is no credit rating system specifically designed for SME in Vietnam. Respondent believes that it is necessary to establish SME credit rating agency. Government and financial institutions are expected to support SME.

Respondent believes that the beneficiaries of SME credit rating system are financial institutions; and SME's business partners. It presumes that SME credit rating can benefit to better target SME loan; to support financing access for SME; to assist self-evaluation for SME; and to increase international network of SME. However, providing credit rating system may faces barriers of difficulty to obtain reliable data and information on the condition of SME; lack of access to financial information and transparency; and absence of standardized report.

Assessing the proposal of ASEAN SME credit rating benchmarking, respondent sees the benefits of promotion of comparability and benchmarking within SME, expansion of loan access in domestic and regional level, and support for AEC. The proposal may face barriers of absence of standardized report, lack of access to financial information and transparency, and limitation of fund support.

Particularly for Vietnam, respondents expect the government to allow direct access to public government database and to provide incentive for SME credit rating agency, as the form of support for SME financing access. Benchmarking may be beneficial for SME.

5.3.4. Cambodia

The information presented here is from filled questionnaires of Credit Bureau Cambodia (CBC); Federation of Association for Small & Medium Enterprises of Cambodia (FASMEC). Meanwhile, respondents which have not responded yet are the National Bank of Cambodia serving as regulator and the Association of Banks in Cambodia serving as user.

General Information and Institutional Aspect

Credit Bureau Cambodia (CBC) stated that they are not a proper institution to be inquired as a credit rating agency. CBC only supplies credit reports, not credit rating, to its members. Although these reports cover the personal loans as well as SME loans, but it is not a rating instrument. Those are informative instruments of the loan assessment processes conducted by the banks and MFIs in Cambodia.

SME Financing

SME, including micro enterprises in rural areas, dominates Cambodia real sector economy in number of firms (99%) and employment (45%). SME operates almost entirely in the informal sector and are typically not registered at Ministry of Commerce. While often licensed to operate by relevant ministries at the provincial-municipal level, SME is normally regulated informally by local-level authorities. Small enterprises is the most dominant category in Cambodia. Composing the aggregate job opportunity of 1.6 million works, micro enterprises provide around 970 thousand, SME provide 200 thousand, while large enterprises provide 450 thousands work.

SME face major issues on credit and banking needs, being the requirement of collaterals; and detailed financial report. Responding to that issue, SME may look for alternative sources of funding such as personal funding; and funding from non-bank financial institutions (e.g. pawnshop, factoring, angel investor, venture capital).

As additional information, CBC discloses that SME loan in Cambodia is too broadly defined. Consensus definition may classify borrowers who own a company and asking for housing loan or loan to support another business as creditors applying either SME Loan or Personal Loan. It is subjective depending on each crediting bank.

Rating Methods

The credit reports published by CBC expose several detailed information on each SME, including historical and outstanding loan; and payment history on the last 24 cycles. However, the reports do not provide information on current and historical company structure, as well as ownership of the SME; company businesses; and SME financial reports. CBC does not provide advice on whether the SME are entitled to loan or not, since it is the domain of financial institutions. CBC is also not involved in the banks' decision regarding SME loan entitlement. It solely provides historical credit information to the banks. Currently, the Cambodia is in the phase of establishment of the Commercial Bureau that will be assigned to be in charge of commercial information. The bureau will probably be launched next year.

Barriers and Incentives

Currently, there is no credit rating system specifically designed for SME in Cambodia. Respondent believes that there is no necessity to establish SME credit rating agency due to low-level of SME's readiness. The respondents in Cambodia suggests to build capacity of credit agency, so that the agency can easily access SME credit.

Respondent presumes that SME credit rating can benefit to understand risk profile of SME; to better targeted for SME loan; and to develop track record of SME. However, providing credit rating system may faces barriers of the difficulty to obtain reliable data and information on the condition of SME; and absence of regulation from government to use SME credit rating. Assessing the proposal of ASEAN SME credit rating benchmarking, respondent sees the benefits of expanding loan access in domestic and regional level; and supporting AEC. The proposal may face barriers of absence of standardized reports; and limited fund support.

Particularly for Cambodia, benchmarking may induce SME themselves working hard to make a good credit; and pursue strategic strengthening SME to earn positive growth. On the other hand, it may discredit SME in Cambodia if they are still weak and no foreigners want to invest in local SME. Therefore, SME credit rating should be supported with strong regulations.

5.3.5 Lao PDR

The information presented here is based on filled questionnaires of Bank of Lao PDR as regulator, Credit Information System as actor for credit rating; Department of Small and Medium Enterprise Promotion (DOSMEP) as regulator of SME, and Lao Development Bank as user.

General Information and Institutional Aspect

Bank of Lao PDR and Bank of Lao PDR-Credit Information System are government-owned institution. They do not conduct SME credit rating, nor have plan to do so in the near future. However, it is researching about possibility to conduct SME credit rating in the longer future. Lao Development Bank is a state-owned commercial bank that creates bank deposits from the public and provide loans to SME.

SME Financing

SME sector in Lao PDR dominates economic activity, growth and development with almost 94% of employment generated in this sector, making it a key contributor to the country's declining unemployment and means of income. Disaggregating number of enterprises, it comprises of micro enterprises (21%); small enterprises (58%); medium enterprises (16%); and large enterprises (5%). Hereby, SME sector makes up approximately 74% of the total enterprises.

SME face major issues on credit and banking needs, being the requirement of collaterals; detailed financial report; and business licenses. Responding to that issues, SME may look for alternative sources of funding such as funding from non-bank financial institutions (e.g. pawnshop, factoring, angel investor, venture capital); and owners' relatives.

Lao Development Bank is a state-owned commercial bank that provides to SME. The loans have a high interest rates, with loan terms of three years (grace period not over 1 year), maximum loan does not to exceed 1,250,000 USD, and requires collaterals such as land and house. For the last 10 years, the lending has increased rapidly especially Lao has 15,000 accounts which equivalent to 750 million dollars in 2013, which cover about 99% of SME, the loan size cover 65%; interest rates 15% per year for Lao kip; and 11% for US dollar and Thai baht; and the NPL is 2.93%.

Investment or loan analysis particularly using the 5Cs and 3Ps as the basis for credit approval process to the SME, the most likely sectors to be granted loan are trading and investment. The default risk of SME loans is assessed by tracking their business and asks SME to send financial report regularly every 3 months or 6 months at the latest. If there is an indication of bad performance from SME lending, the bank will consider whether the risk level still suitable and might even consider asking for assets collateral as the last resource. In order to approve new loans to high-risk customers and defaulted risk customers (even if all the settlement already finished), banks will require special surveillance due to higher credit risk level and will set interest rates higher than normal.

Barriers and Incentives

Currently, there is no credit rating system specifically designed for SME in Lao PDR. DOSMEP believes that it is necessary to establish SME credit rating agency in order to help banks making decision in providing loan to SME.

LDB believes the need to establish a credit rating system for analysing the reliability level of companies operating in Laos. LDB is sure that if the system is put in practice that will help improving the SME access to financing. The commercial banks may not be reluctant to grant more loans to the good rating SME. LDB also believe that Banks will use SME credit rating if available since it will become one of factors or criteria for approving a commercial loan to any SME borrowers. The rating system will also help the enterprises consider themselves in terms of applying a suitable amount of loan from the bank.

Respondents in Lao PDR think that the beneficiaries of SME credit rating system are financial institutions; relevant SME; and SME's business partners. It presumes that SME credit rating can be beneficial to understand risk profile of SME; to better targeted for SME loan; to support financing access for SME; to develop track record of SME; to assist self-evaluation for SME; to increase the confidence of SME; and to increase international network of SME. However, providing credit rating system may faces barriers of difficulty to obtain reliable data and information on the condition of SME; absence of regulation from government to use SME credit rating; lack of access to financial information and transparency; no standardized report; and lack of collaterals owned by SME.

Assessing the proposal of ASEAN SME credit rating benchmarking, respondents see the benefits of provision of reliable and standardized rating on conditions and risk within ASEAN SME; promotion of comparability and benchmarking within SME; expansion of loan access in domestic and regional level; and support for AEC. The proposal may face barriers of absence of standardized reports; heterogeneity in SME condition; and limitation of fund support.

Particularly for Lao PDR, respondents expect government to provide incentive for SME credit rating agency. Currently, Lao PDR has SME Fund with lower loan interest rate, lend by the Lao Development Bank. If it has an SME credit rating agency, it will be able to increase the confidence to increase international network of SME.

ASEAN benchmarking for SME is believed to be very beneficial by DOSMEP and LDB. Since the rating system will measure the reliability level of SME and it will help the commercial banks to develop themselves gain trust from the public. The benchmark and standardized report that comparable with other region also will present as a good opportunity for SME to search for fund sources and to expand their businesses to the larger economic countries.

5.3.6. Myanmar

The information presented here is based on the filled questionnaires of SME Development Department DISI, Ministry of Industry.

General Information and Institutional Aspect

No institution is considered to be suitable to be inquired as credit rating agency in Myanmar.

SME Financing

SME in Myanmar is not yet formally defined, due to the inexistence of specific law regulating SME. The National Parliament is currently working on the drafting of Law on SME. It is expected that the defining perimeters of SME will be based on asset and number of workers. SME sector in Myanmar contributes to 30%-53% of total GDP, 50%-95% of total employment, and 19%-31% of total export.

SME face major issues on credit and banking needs, being the requirement of collaterals; detailed financial report; and length of processing time. Responding to that issue, SME may look for alternative sources of funding such as personal funding; funding from government; and owners' friends and relatives.

Barriers and Incentives

Currently, there is no credit rating system specifically designed for SME in Myanmar. Respondent believes that is necessary to establish SME credit rating agency. It expects that SME can get loan without needing to have collaterals when there is a credit guarantee company.

Respondent presumes that SME credit rating can be beneficial to understand risk profile of SME; and to better targeted for SME loan. However, providing credit rating system may faces barriers of the difficulty to obtain reliable data and information on the condition of SME; and absence of regulation from government to use SME credit rating.

Assessing the proposal of ASEAN SME credit rating benchmarking, respondent sees the benefits of providing reliable and standardized rating on conditions and risk within ASEAN SME; and promoting comparability and benchmarking within SME. The proposal may face barriers of absence of standardized reports; and lack of access to financial information and transparency.

Particularly for Myanmar, benchmarking is believed to be somewhat beneficial by respondent. The issue needing special attention is that most of SME in Myanmar are smaller than SME in other AMS. Besides, rules and regulations for SME finance are still relatively weak.

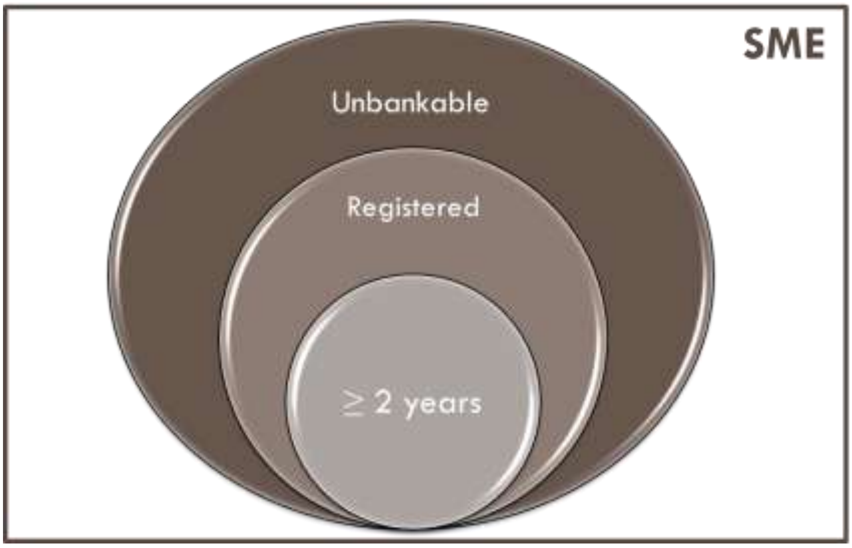
CHAPTER 6: GUIDING PRINCIPLES FOR SME CREDIT RATING IN ASEAN

As has been previously discussed, there is a need to develop comparable minimum standard guiding principles for SME credit rating that can be accepted and adopted for AMS. This chapter attempts to propose these principles. However, given the variations within AMS, the guiding principles (benchmark methodology) will at least consist of: (i) eligible criteria for SME to be rated; and (ii) comparable minimum standard model for SME credit rating. Some necessary SME credit rating infrastructure, in particular the required institution and regulation will also be proposed in this chapter. Finally, the chapter will be concluded by providing alternative activities to build awareness on SME credit rating among AMS.

6.1. Eligible Criteria for SME to be Rated

Having discussed and surveyed the relevant stakeholders throughout the period of the study, the study comes up with a proposal that the eligible criteria for SME to be rated is **"Un-bankable and registered SME with at least 2 years of operation"**.

Figure 6.1. Eligible Criteria for SME



Source: LPEM FEUI, 2014

The definitions and rationale of such proposed criteria are as follows:

- **Unbankable SME**: In practice, there are many definitions of un-bankable. However, consistent with the scope of the study that has been discussed earlier, the study defines un-bankable as SME that never receive commercial credit/lending facility from bank. The definition emphasizes two key points: (i) commercial credit/lending facility and (ii) from bank. With this in mind, the definition may possibly cover SME that (a) have no experience at all with banks; (b) may have credit facility from non-bank lenders; (c) may have only deposit/saving account in banks; and (d) owner of SME who might individually already have consumer credit facility from bank.
- The main motivation to propose such criterion is to attract new SME into the banking system (**additional principle**), rather than just competing for the existing bankable SME. The study argues that such criterion is not too restrictive and hence is appropriate to open up an opportunity for SME to be included in the banking system.
- **Registered SME**: In order to be eligible for rating SME must be officially registered or recorded. Type of registrations may vary and heavily depend on the institution and regulation landscape of the country. For instance, it may include legal permit (e.g. company deed), business licenses (e.g. distribution, retail license), credit information from non-bank lenders, utilities payment (e.g. electricity, water, and gas), pension fund, depository insurance, etc. The source of registry information may come from public offices (e.g. local government, state owned enterprises) as well as private institutions (e.g. credit card company, private database company).
- This criterion is also as important as previous one due to difficulties in obtaining information about SME. Thus, apart from financial information provided by the SME being rated, a credit rating agency must also be equipped with supporting **credible source of information** on its non-financial track record and history. Furthermore, a registered SME also implies that it is a **formal and legitimate business** entity rather than informal.
- **SME with at least 2 years of operation**: This explicitly implies that SME credit rating is not suitable for start-ups as they have no record at all. In addition, one year of operation is not sufficient to build a credible track

record. The study argues that having a minimum of two year of operation is sufficient for a SME to gain its learning curve as its business complexity is not as complex as large corporate.

- This criterion is relevant because it reflects **sustainability** of the SME business. The longer the duration, the more and better information will be available for credit rating agencies to be used. Moreover, with such a year of operation, it may also imply that the SME is at least already **has some form of financial report**, albeit simple and unaudited.

6.2. Guiding Principles of SME Credit Rating Methodology: A Comparable Minimum Standard Model

The proposed principle of SME credit rating methodology consists of: (i) indicators for developing the rating, (ii) weight of the indicators, (iii) models of the rating, and (iv) the rating scale.

a) Indicators for SME Credit Rating.

In developing a comparable minimum standard model for SME credit rating, the study follows the existing approaches that particularly includes quantitative and qualitative aspects of SME and then categorizes these aspects into non-financial and financial aspects. Each aspect contains selected indicators that will be used for scoring and rating purpose. According to Altman, Sabato and Wilson (2010)[3], that focused their study on developing credit risk models specifically for SME in US and UK, non-financial information is used as a predictor of company creditworthiness. They used non-financial and regulatory compliance data to supplement the limited accounting data of SME.

Having taken into account the different characteristics of SME in ASEAN from survey and interview and referencing from a number of literatures including benchmarking from three reference countries outside ASEAN, the study proposes the following indicators.

[3]Altman, Edward I, Gabriele Sabato. Nicholas Wilson. 2010. The Value of Non-Financial Information in Small and Medium-Size Enterprise Risk Management

- Non-Financial aspects contain indicators such as: (i) management character and management experiences, (ii) sales compositions and business conditions, (iii) history of the company, (iv) years of operation of the company, (v) industry or business sector, (vi) innovation initiative, (vii) payment habits, and (viii) government policy.
- Financial aspects contain indicators such as: (i) profitability, (ii) solvency or stable financial debt, (iii) liquidity and cash flow, (iv) asset or collateral, (v) average balance in financial institution (e.g. bank, non-bank).

b) Weights for the Indicators of SME Credit Rating.

This is the next process after having identified the selected indicators. In general, there are two commonly applied methods namely expert judgment-based and statistical-based methods. In practice, either methods, or a combination of both are employed depending on the circumstances. There are body of literatures that suggest some weight determination and benchmarking of these indicators. Bank Indonesia pilot project study on SME credit rating (2012) puts more weight (65%) on non-financial aspect (business, management, market, etc.) component rather than financial aspect, which only account for 35%. On the other hand, Ernst Greilich (2009)[4] proposes a relatively moderate structure, where the *soft fact* component, i.e. non-financial aspect (market, management, business condition) should be given weight of 40% – 50% weight, while the hard fact component, i.e. balance sheet/financial information a 50% – 60% weight. In his study, Altman, Sabato and Wilson (2010) propose 40% for financial and 60% for non-financial aspects.

In addition, findings from field visit to selected AMS, suggests that there exists a large variation of weight determination for these indicators. For instance: financial aspect indicators are weighted from the lowest of 35% in one country to the highest of 70% in other country. Moreover, within financial aspects, each country also has different emphasize according to SME characteristics and the country's domestic circumstances. As an illustration, one country focus more on record of past default, while others on record of payment habit, or payment

[4]The study is referenced from BI study on pilot project of SME credit rating (2012)

capacity or collateral. Taking all of the facts into account, the weight of the indicators must correspond to different economic structure of each AMS.

Having examined the SME rating infrastructures in each AMS, the study classifies these countries into three clusters which include: (i) cluster 1, a well-developed SME credit rating system like in Singapore and Malaysia; (ii) cluster 2, a fractional SME credit rating system as in Thailand, Indonesia, and Philippines; and finally, (iii) cluster 3, the least developed infrastructure covering: Brunei Darussalam, Cambodia, Myanmar, Laos PDR, and Vietnam.

Accordingly, different weight of indicators must correspond to different clusters.

- **Cluster 1: Singapore and Malaysia**
  The countries in this cluster already have a well-developed financial system and hence the proposed weight in SME credit rating model for financial indicators is greater than non-financial indicators. It is argued that the required financial indicators are available in their financial statement as SME in these countries are already advanced and familiar with the standard financial reporting. Hence, it is proposed that the **financial aspect is weighted ≥ 60% and non-financial aspect is weighted ≤ 40%.**

- **Cluster 2: Thailand, Indonesia, and Philippines**
  Countries in this cluster have a fractional SME credit rating infrastructure, suggesting that they do not have a well-developed SME rating system yet, but are going to that direction, either through developing suitable rating models or setting up the necessary institution and regulations. Large part of SME in this cluster is not as sophisticated as those in cluster 1, whereas they are unfamiliar with standard financial reporting. Most of them still use very basic record keeping system, not even an audited report. For that reason, the proposed weight in SME credit rating model in this cluster for financial indicators is smaller than non-financial indicators. Hence, it is proposed that these countries applied **financial aspects 0f 30%-40% and non-financial aspect of 60%-70%.**

- **Cluster 3: Brunei Darussalam, Cambodia, Laos, Myanmar and Vietnam**

Relative to two other clusters, countries in cluster 3 have the least developed credit rating infrastructure. Most of them only have credit information bureau and have not developed the credit rating industry yet. Moreover, it is often argued that the SME in these economies are considered less developed than those in cluster 2, especially with respect to financial reporting. Hence, it is proposed that these countries applied **financial aspect of ≤ 30% and non-financial aspect of≥ 70%.**

The proposed weight for each detailed indicator is presented at Table 6.1. For simplicity, the study selects cluster 2 as a base cluster.[5] For different clusters, some minor adjustments are required.

[5] The selection of cluster 2 is also consistent with Altman, et.al (2010) study.

Table 6.1 Proposed Weights for ASEAN SME Credit Rating

Indicators	Weights	Sources of Information
I. Non- Financial Aspects	**60%**	
a. Business Aspect		
Industry or business sector	9%	Company deed, business license, interviews
Business condition/sales condition	10%	Interviews
Government policy	2%	Secondary information, interviews
b. Management Aspect		
Management character and experiences	10%	Company deed, interviews
History of the company	3%	Company deed, interviews
Years of operation	3%	Company deed
Innovation initiative	5%	Interviews
Payment habits (frequency, experiences of delays/defaults)	18%	Secondary information from creditors, utilities payment, credit card payment, interviews
II. Financial Aspect	**40%**	
Profitability (profit margin, ROA)	4%	Financial report, interviews
Solvency ratio and stable financial debt (debt to equity ratio, debt to total asset)	8%	Financial report, interviews
Liquidity and cash flow (current ratio, quick ratio)	10%	Financial report, interviews
Asset or collateral	10%	Financial report, interviews
Average balance in financial institution (e.g. bank)	8%	Financial report, interviews
Total	**100%**	

Source: LPEM FEUI, 2014

These proposed weights for each detailed indicator are simply taken from an average weight of the same indicators from the literatures in the study and the field visit.

Information for these detailed indicators is coming from different sources. For financial aspect, it heavily relies on the interview and on the submitted financial report by the SME. Aside from the interview with the SME, information for non-financial aspect may also come from other secondary sources, including other creditor institutions, public utilities offices. Further explanation for this can be found in section 6.3.2.

c) Models for SME Credit Rating

Having weight indicators determined, the next step is to develop a predictive model that is able to calculate/compute the probability of SME being default in a certain period. Default is one of the most important events that can take place in the life of a firm. It has grave consequences for all stakeholders, from shareholders and debt-holders to suppliers and employees. The well known example such as Enron, World-Com and Lehman Brothers, clearly demonstrate how catastrophic such an event can be. The extent of the damage caused to both economy and society will of course depend on the size and the systemic nature of the defaulting firm. Nevertheless, even for a small firm without any systemic implications, default will be an event of great importance to the stakeholders.

Measurement of default risk or estimation of default probability involves studying the tail of a probability distribution. From a statistical point of view, estimating the tail probability is, unsurprisingly, difficult. The difficulties arise from the fact that rare events are rarely observed. To obtain a sample with a number of default cases large enough for a meaningful statistical analysis, one must gather a very large data sample, which means observing many firms over a comparatively long time period. Therefore, a measurement of borrower's default risk by financial institution is a vital and integral part of its credit risk management process, which is acknowledged by international best practice in banking (Basel II Accord).

Modelling a risk of default means develop a statistical model that calculates/computes the probability that SME being assessed will default in a certain period of time, typically in the following 12 months and it is developed using a large pool of historical dataset.

A typical definition of probability of default is the risk that the borrower will be unable or unwilling to repay its debt in full or on time. The risk of default is derived by analysing the obligor's capacity to repay the debt in accordance with contractual terms. Probability of default is generally associated with financial characteristics such as inadequate cash flow to service debt, declining revenues or operating margins, high leverage, declining or marginal liquidity, and the inability to successfully implement a business plan. In addition to these quantifiable factors, the borrower's willingness to repay also must be evaluated. Among other risks models, the most widely adopted in SME credit rating is Probability Default Model (PDM).

The Model uses statistical probabilities to classify firms into two risk classifications of default risk:

- Probability of Default (PD): a percentage figure which represents the likelihood a particular SME will default during the next 12 months.
- Percentile ranking: a value which indicates where a particular SME ranks, relative to the whole SME population. As default rates may fluctuate over time, the percentile provides a relative measure of an SME's risk.

There are several alternatives of methods to calculate probability of default, including:

1) Altman Z Score

Altman (1968) is generally regarded as the first researcher to use a statistical model to connect default to different accounting ratios taken together instead of one ratio at a time. Specifically, Altman employed a linearmultiple discriminant analysis (MDA) based on five accounting ratios to classify firms that went bankruptseparately from firms that did not. The MDA can be understood by using a simple example where only two firm characteristics – Retained earnings/Total asset and EBIT/Total assets – are used to classify firms into default and non-default groups.

The MDA finds a linear function of these two variables, known as the discriminant function, so that most of the firms that defaulted will be on one side of the discriminant function whereas most of the firms that did not default will be on the other side. The discriminant function is represented by the straight line that best separates the two groups.

The classification based on the MDA would be perfect if all defaulted firms had been on one side of the discriminant function and all surviving firms had been on the other side. In such a situation, there would be no misclassification for the *in-sample* analysis. In practice, however, it is generally not possible to find variables that give rise to a perfect discriminant function, separating completely the defaulted firms from those which did not default. The best realistic scenario one should hope for is to find variables that generate some minimum overlap. There are some firms of each type, bankrupt and non-bankrupt, sitting on the wrong side of the discriminant function.

We now describe the Z-score method proposed by Altman (1968). Suppose there are m accounting ratios or discriminating variables, X1, X2, ..., Xm, and we want to use them to come up with a credit rating model. Altman's Z-score method uses the discriminating variables in a linear fashion. The analysis involves estimation of the following discriminant function:

$$Z = \beta 0 + \beta 1X1 + \beta 2X2 + \ldots + \beta_m X_m$$

where $\beta_0, \beta_1, \beta_2, \ldots \beta_m$ are the unknown parameters.

Notations:

Xikj = value of the ith accounting ratios for firm j in group k

Nk = number of firms in group k

Zkj = value of the discriminant function for firm j in group k, i.e.,

$$Z\,kj = \beta_{0,} + \beta_1 X_{1kj} + \beta_2 X_{kj} + \ldots\ldots \beta_m X_{mkj}$$

2) Ohlson O Score

Similar to the Z-score, the O-score can be described as a statistical bankruptcy indicator generated from a set of balance sheet ratios. Where it differs from Altman's original is in its application of a much larger sample of corporate successes and failures to inform the model. The wider pool of just over 2000 companies gives it a more robust sample for basing the scaling factors applied to its nine variables with the aim of increasing its accuracy. The difference in this sample size is especially apparent when compared to Altman's original whose statistical technique of pair matching is limited to just 66 companies (it's amazing it's still as successful as it is!). Subsequent studies have generally found the O-score to be a better forecaster of bankruptcy than the Z-score; however neither has been able to regularly beat Merton's DD or the CHS model since their discoveries.

3) Logistic Regression

Logistic regression can in many ways be seen to be similar to ordinary regression. It models the relationship between a dependent and one or more independent variables, and allows us to look at the fit of the model as well as at the significance of the relationships (between dependent and independent variables) that we are modelling. However, the underlying principle of binomial logistic regression, and its statistical calculation, is quite different to ordinary linear regression. While ordinary regression uses ordinary least squares to find a best fitting line, and comes up with coefficients that predict the change in the dependent variable for one unit change in the independent variable, logistic regression **estimates the probability of an event occurring** (e.g. the probability of one firm default). What we want to predict from a knowledge of relevant independent variables is not a precise numerical value of a dependent variable, but rather the probability (p) that it is 1 (event occurring) rather than 0 (event not occurring). This means that, while in linear regression, the relationship between the dependent and the independent variables is linear; this assumption is not made in logistic regression.

4) Artificial Neural Network

The relationship between default and a firm's attributes or common risk factors may be too complex or nonlinear for the modeling approaches such as MDA and logistic regression to handle effectively. A powerful nonlinear modeling tool may capture the default relationship. Artificial neural networks (ANN) are such a modeling tool. An ANN is a mathematical technique used to mimic the way that human brain supposedly processes information. An ANN structure can range from simple to highly complex and computationally intensive. The ANN technique has been widely applied, with varying degrees of success. Its popularity has been aided by the rapid improvement in computing power at a lower cost.

ANN was originally designed for pattern recognition and classification. However, it can also be used for prediction applications. Therefore, it is not surprising to see ANN applied to forecasting bankruptcy; for example, Odom and Sharda (1990), Wilson and Sharda (1994), and Lacher et al. (1995).

ANN are a family of statistical learning algorithms inspired by biological neural networks (the central nervous systems of animals, in particular the brain) and are used to estimate or approximate functions that can depend on a large number of inputs and are generally unknown. Artificial neural networks are generally presented as systems of interconnected "neurons" which can compute values from inputs, and are capable of machine learning as well as pattern recognition thanks to their adaptive nature.

An ANN typically comprises several layers of computing elements known as nodes (or neurons).Each node receives input signals from external inputs or other nodes, and processes the input signals through a transfer function, resulting in a transformed signal as output from the node. The transfer function essentially determines how excited a particular neuron is. The transfer function is typically chosen so that a fully excited neuron will register 1 and a partially excited neuron will have some value between 0 and 1. The output signal from the node is then used as the input to other nodes or fi nal result. ANNs are characterized by their network architecture which consists of a number of layers with each layer consisting of some nodes. Finally, the network architecture displays how nodes are connected to one another.An ANN is typically defined by three types of parameters:

- The interconnection pattern between the different layers of neurons
- The learning process for updating the weights of the interconnections
- The activation function that converts a neuron's weighted input to its output activation

5) **Cox Proportional Hazard Models**

Proportional hazards models are a class of survival models in statistics. Survival models relate the time that passes before some event occurs to one or more covariates that may be associated with that quantity of time. In a proportional hazards model, the unique effect of a unit increase in a covariate is multiplicative with respect to the hazard rate. For example, taking a drug may halve one's hazard rate for a stroke occurring, or, changing the material from which a manufactured component is constructed may double its hazard rate for failure. Other types of survival models such as accelerated failure time models do not exhibit proportional hazards. The accelerated failure time model describes a situation where the biological or mechanical life history of an event is accelerated.

Just like the weight determination, the appropriate model selection has to take into account the financial system and availability of credit rating infrastructure in each country. The main reason is different models may require different set of data and information that depends on the development of financial system in the country. By taking the clusters above, the proposed model for each cluster is as follows:

- **Cluster 1: Singapore and Malaysia**

  As these countries have already a well-developed financial system and credit rating infrastructure, the study proposes to use one of these models; Altman Z-score, Ohlson O-score (logistic regression), Survival Analysis, Artificial Neural Network or the more advance model like Poisson Intensity model. The first two models are widely adopted in finance world, particularly to predict corporate defaults and financial distress. The advantage of these two models is easy to calculate and has an intuitive interpretation of default probability. A specific modification and advancement of the models has also been implemented by many countries (e.g. Singapore). The latter models are more sophisticated and advanced in their statistical techniques. One of the advantages of these models is its dynamic nature, that can predict the state of a company (failure/bankrupt, survive) across time. In practice, however the existing credit rating agencies in both countries have already developed and applied their own model.

- **Cluster 2: Thailand, Indonesia, and Philippines**

  Countries in this cluster have a fractional SME credit rating infrastructure, which means that they do not have a well-developed SME rating system yet, but are going to that direction, either through developing suitable rating models or setting up the necessary institution and regulations. Large part of SME in this cluster is not as sophisticated as those in cluster 1, whereas they are unfamiliar with standard financial reporting. Most of them still use very basic record keeping system, not even an audited report. For that reason, the proposed weight in SME credit rating model in this cluster for financial indicators is smaller than non-financial indicators. In relation to that, the proposed appropriate rating model for this cluster is the conventional Altman Z-score and/or Ohlson O-score (Logistic regression). As has been mentioned previously, the main advantage of Altman Z score and Ohlson O-score is easy to use and have an intuitive interpretation of default probability. These two models are suitable particularly for rating agency at its early stage of development.

- **Cluster 3: Brunei Darussalam, Cambodia, Laos, Myanmar and Vietnam**

  Relative to two other clusters, countries in cluster 3 have the least developed credit rating infrastructure. Most of them only have credit information bureau and have not developed the credit rating industry yet. Moreover, it is often argued that the SME in these economies are considered less developed than those in cluster 2, especially with respect to financial reporting. Providing the condition, the proposed appropriate method for these economies is to develop the simple credit scoring rather than rating model.

d) Rating Scale.

After applying the credit rating model, the SME will be rated based on a specific rating scale. Based on the references in this study, SME credit rating of selected CRA ranged from 8 to 15 scales. The below table summarises SME rating scales of selected CRA in the study.

Table 6.2. Summary of Rating Scales from Selected SME Credit Rating Agencies

BDF France	JCR Japan	SMERA India	SMERA India (for government subsidized SME credit rating)	ICRA India	CRISIL India	DP Info Group Singapore	Bank Indonesia (Pilot Test 2011)
13 scales from 3++ (excellent) to (unfavourable information)	11 scales from AAA (the highest level of certainty of an obligor to honour its financial obligations) to D (all the financial obligations are, in effect, in default)	8 scales from 1 (the highest) to 8 (the lowest)	15 scales from SE1A (the highest financial and performance capacity) to SE5C (the lowest financial and the poorest performance capacity)	8 scales from ICRA SME1 (the highest credit quality rating) to ICRA SME8 (the lowest credit quality rating)	8 scales from SME1 (highest) to SME8 (default)	8 scales from DP1 (the lowest probability of default) to DP 8 (the highest probability of default)	15 scales from A1B1 (the highest financial and non-financial indicators) to A3B5 (the lowest financial indicators and the poorest non-financial indicators)

Source: Several sources

As a minimum standard for ASEAN SME Credit Rating, **the study proposes to apply 8 rating scales** as applied in many countries like India and Singapore. Not only is very simple, but the use of 8 rating scale is also sufficiently informative to capture different grades of credit quality. The scale could be in the form of number (e.g. 1 to 8), letter (e.g. AA to D) or combination of both (SME1A to SME4B). **In principle, the highest scale (e.g. 1, AA or SME1A) describes a characteristic of SME with the lowest probability of default or highest quality of credit while the lowest scale (e.g. 8, D or SME4B) is for SME with the highest probability of default or lowest credit quality.**

6.3. Necessary Credit Rating Infrastructure: Institution, Information and Regulation

In order to implement the guiding principle, the existence of special credit rating agency for SME in each AMS is necessary. This is critical considering that SME has different characteristics and hence has different assessment tool than the large corporate. Consequently, a specialized organization is required to conduct the analysis. However, such organization could be established in a form of either a special section/division in the existing credit rating agency or a new standalone institution. Currently Malaysia and Singapore are the only AMS that already have a well-established SME Credit Rating system. While Malaysia has Credit Bureau Malaysia (CBM), a specialized standalone SME credit rating agency, there are several credit rating agencies in Singapore that perform SME credit rating all of which are a part/division of the existing credit rating agencies (e.g. DP Information). The rest of ASEAN countries have not established such system yet.

The use of external credit rating for risk management purpose in banking industry has been acknowledged by international best practice (Basel II framework). The framework also recognizes that retail credit and loans to SME will receive a different treatment than corporate loans and will require less regulatory capital for given default probabilities. The framework also allows certain degree of national discretion for applying and adapting the standards to different conditions of national markets. However, it must be consistent with prudential banking and financial stability rules in the country.

On the other hand, the recent global credit crisis has arisen widespread concerns about the functioning and model of credit rating agencies. There exists a general consensus on a need to strengthen the regulation of credit rating industry. Taking this into consideration, the study attempts to propose the proper institutional setting for SME credit rating agencies.

6.3.1. Criteria for SME Credit Rating Agency: The Institution and Payment System

There are at least three main concerns often raised by the banking system as a prime user of the SME credit rating. They are as follows: (1) *Credibility of the agency*. The issues typically involve the rating methodology adopted by the agency, source of information in the rating model, issues of objectivity and independency of the agency; (2) *Rating fees*. This typically covers concern like how the fee is determined, how much the fee is and who should pay for the fee; and (3) *Rating process*. Typical issues raised include how the agency conduct the rating, and how long does it take.

Against this background, the criteria of proposed SME credit rating agency must be able to counter all of the above concerns. Thus, regardless of its type of institution (a standalone institution or a division of existing rating agency) the credible SME rating agency must not only adopt a sound rating methodology, and has reliable source of information, but it must also be objective and independent in conducting its services. Further, the agency should be able to explain and describe transparently about the fee structure and rating process as well as its implications to the user. In addition, to further advance the credibility of the agency, it must also be registered and accredited by financial regulator (e.g. Central Bank, Financial Service Authority, and/or Securities Exchange Commission) in the country. Unless all of these criteria are met, no banks will be interested to use its service.

In the past, credit rating industry heavily relied on an issuer-pay model, where firms being rated pay the agency for the rating service. This sometime creates conflict of interest for the rating agencies as their main source of revenue, i.e. rating fee comes from the issuer that the rating agency supposed to objectively rate. Although every rating agency publishes its own rating fee structure, but in practice there is a widespread use of negotiated rates for frequent issuers. Even if it has long been claimed that this rates is unlikely to bias the agency's independent ratings, but the recent subprime crisis in US has shown the other way. For that reason, a number of strict rules and regulations have been imposed in the rating industry to avoid and minimize the likely impact of such conflict.

Unlike large corporate, most SME have very limited financial capacity, even for their day to day business operation. Thus, carrying an additional cost for rating would surely give more pressure to their financial condition. Unless the ratings produce better chance to get financing, most SME are unwilling to bear the cost. Having said that, the issuer-pay model as mostly applied for large corporate is perhaps inappropriate for SME. Another alternative, i.e. the investor-pay model, where those who need the information pay for the rating services has also some drawbacks. One most important limitation of this model is prone to free-riding activities due to a public good nature of the ratings. This in turn will adversely affect the agency's source of income, resulting in insufficient resources for research and poor quality of ratings.

Owing to this situation, there is a need to have a special payment model that can strike the balance between different interest of the SME and the rating agencies, all at once. This study suggests employing **a combination of an investor-pay (subscription) model and a subsidy from government**, which is based on model developed by Deb and Murphy (2009). The basic idea is simple. The rise of speed of information diffusion due to technology development has made the price response very sensitive to a split second. This is likely to ensure that there are some investors that are willing to subscribe to get speedy information rather than waiting for the leaky information (*free ride*) in the market. Thus, the delay in time has increased opportunity cost of free riding for some investors. In the end, investors have to decide whether to *free ride* or *subscribe* by weighing the benefit (get speedy information) and the cost (payment) of subscription. A rational investor would choose to subscribe if he/she considers the benefit is larger than the cost of subscription, and vice versa. The problem emerges when there are not enough investors who find it profitable to subscribe or relatively modest subscription fee charged. In this case, the investor-pay model alone is not able to generate sufficient income for the rating agency. As a result, the agency will have financial difficulties or will have to cut the cost and sacrifice the quality of research.

To avoid such situation, a supplementary source of revenue for rating agency is necessary. An alternate source may come from a government subsidy. Nevertheless, the optimal amount of subsidy must be associated to a certain key performance indicators (e.g. subscription revenue, market share) and must be auctioned for a certain period).

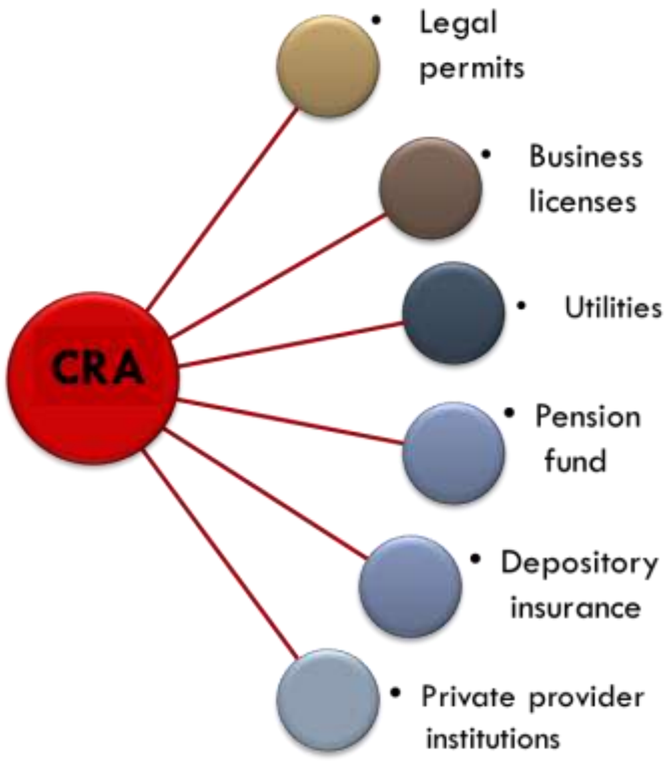
A subsidy, in this case, represents the role of government involvement in this model. The main rationale for this, is establishing an SME credit rating system is parallel to opening up access to finance to SME, which in turn, produces great positive externalities. As postulated by the theory, leaving such externalities to market mechanism tends to be under-produced than socially optimal. Consequently, there is a strong justification for the government involvement to correct such market failure.

Except for those who have already established, the study argues that this model is suitable to be adopted for SME credit rating agency for at least four reasons, namely (i), it would align the incentive of the rating agencies with investors; (ii) it eliminates the conflict of interest of the rating agency; (iii) it eliminate free riding problems; and (iv) it would also ensure a commercially viable credit rating agency industry.

6.3.2. Criteria for SME Credit Rating System: the Information and Regulation

Apart from the existing Credit Information Service, the availability of reliable source of financial information for SME is still lacking. The rating agency cannot fully rely on the existing Credit Information Service, as the registered SME in it are already considered as a bankable one. Thus, to overcome such issues, the SME rating agency must be well-equipped with other non-financial supporting information from different sources. This information is required for confirmation purposes and for better learning risk profile of the particular SME being rated. Depending on the authority and regulatory landscape in each country, these sources may include: public registry offices, such as legal permit (e.g. company deed), business license (e.g. retail or distributor license), utilities payment (electricity, water and gas), pension fund, depository insurance agency, and privates companies (credit card companies, private database companies). Source of information for SME Credit Rating is presented in the following figure.

Figure 6.2. Sources of Information for SME Credit Rating



Source: LPEM FEUI, 2014

As previously mentioned, these sources of information are complementary to the financial information obtained from the SME, as it captures the non-financial aspect indicators of the SME. For instance, information about the management aspect i.e. the history and age of the business, or the management character and experience can be extracted from legal permit such as company deed at the local government office. Information about the business or industry sector can be drawn from the type of business license it had from public office. Payment habit of the SME can be justified from their utilities (electricity, water, telecommunication and gas) and/or pension fund insurance premium payment pattern. All of this additional information will enrich and make it easier for the rating agency to assess the SME.

In order to support the establishment of SME Credit Rating System in ASEAN, related regulations regarding SME credit rating infrastructure should be enacted in each AMS, which include:

- **Regulation on credit rating agencies.** All credit rating agencies within AMS have to be registered and accredited by the banking or financial authorities in each country. Currently, most of ASEAN countries that establish credit rating infrastructure, albeit partially have issued such regulations.
- **Regulation on accessing and processing data and information** for credit reporting or credit rating. In order to assure fairness, accuracy and privacy in the practice of credit reporting business by credit rating agencies, regulations on accessing and processing data and information have to be issued by the government in each country. For example, the Government of Malaysia has issued some regulations related to data and information for credit report/credit rating, which are:
  - ❖ Regulation in accessing the Central Credit Reference Information System (CCRIS) within BNM. Under the Central Bank of Malaysia Act 2009, CCRIS was administered by the Credit Bureau under BNM and CCRIS can be accessed by all CRAs, with certain fee paid to BNM.
  - ❖ Personal Data Protection Act 2010 (PDP Act) that regulates the processing of personal data in commercial transactions by the data user/data processor.

- ❖ Credit Reporting Agencies Act 2010 (CRA Act) that provides the registration and regulation of institutions carrying on credit reporting businesses.

Other example of such regulation is in Thailand that has issued a Credit Information Business Act, which regulates controlling and processing credit information to the members or recipients of services provided by NCB (B.E 2545 renewed by B.E. 2549 and further by B.E. 2551 in 2008).

- While the financial or monetary authorities regulates only credit rating agency and banks, other authority bodies from the information provider side (e.g. local government, related ministries) should also issue regulations for sharing the private information to be accessed by the rating agency.
- Although there is no reference of regulation that forces financial institutions to utilize SME credit rating, **a regulation to encourage the utilization of external credit rating for SME** can be imposed in each country. For commercial banks, the utilization of external rating as complementary tools for their banks' internal credit rating/scoring is in line with Basel II. As an example, in Malaysia, the Banking Institute of Malaysia in cooperation with Bank Negara Malaysia, the Association of Banks in Malaysia, CGC, and SME Corporation has issued a guideline to access SME financing in Malaysia. The guideline, among others, encourages the utilization of SME credit rating for loan process of SME.

Another instrument is incentive regulation for the related stakeholders to encourage the widespread use of SME credit rating. For instance, Central Bank or Financial Service Authority might relax the banking prudential regulation on risk weighted asset (RWA) if the banks use external credit rating for SME loan. This in turn will affect the back-up capital requirement for the banks. Another kind of incentive regulation is to attach SME credit rating with another government's SME credit programs, such as credit guarantee program. As an illustration, banks that want to take advantage of credit guarantee program for their SME loan must use of external credit rating for SME as eligible criteria. This case occurs in Malaysia

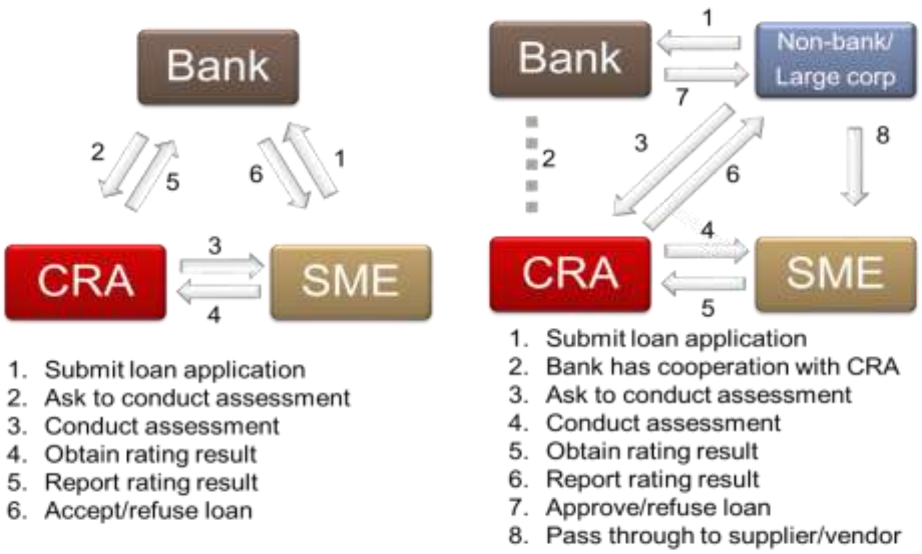
Incentive regulation could also be given to SME being rated, in the form of a subsidized rating fee. As in the case of India, the government provide 75% of rating fee subsidy for SME being rated for the first time.

- **Policy coordination for SME development.** In order to better develop SME in each AMS, there should be a government institution that coordinates policies and regulations related to SME. For example, in Malaysia there is an institution under the PM office that coordinates all policies in SME namely SME Corporation (SME Corp). In Thailand, the same institution has been developed under the PM Office, namely Office of Small and Medium Enterprises Promotion (OSMEP).

6.3.3. The Business Process of SME Credit Rating: Direct scheme vs. Indirect scheme

Below are two alternative schemes of the SME credit rating use.

Figure 6.3. Alternative Uses of SME Credit Rating



Source: LPEM FEUI 2014

The direct SME loan scheme consists of three interrelated parties, namely the Bank, the SME credit rating agency and the SME. In this scheme, two slight variants appear. First, initiative to use credit rating comes directly from the SME that already realizes the importance and benefit of the rating for loan approval. The rating is submitted along with the loan proposal. Second, the initiative to use credit rating comes from the bank that requires the SME to be assessed by credit rating agency as one of the criteria for its loan approval. In most of the cases, the second variant is more likely to occur in developing countries.

Aside from three existing parties, the indirect scheme involves additional party, that is a large corporation or non-bank institution which has direct business relationship with the SME. In this scheme, as a part of the deal the bank entails the large corporate or non-bank institution to conduct SME credit rating before channelling credit to SME. This scheme is typically occurred in supply chain financing or linkage financing through an intermediary institution. Lessons learned from Singapore case suggest that both schemes are workable.

6.4. Building Awareness: Parties involved

The successful implementation of these guiding principles is believed may lead to further SME development in the country, since it tackles one of the crucial impediments of SME, especially access to finance. Therefore, disseminating this guiding principle to gain approval from relevant stakeholders in the AMS is very important. Once it is approved, the next step is to build awareness among relevant stakeholders in AMS for the implementation of this principle in SME credit rating. These stakeholders may include credit rating agency, regulator, government/SME office, chambers of commerce/SME association, bank association, as well as in the SME Working Group in ASEAN. An active contribution from each of these parties (as shown in below figure) will better implement the principles in each country.

Figure 6.4. Building Awareness of SME Credit Rating

Source: LPEM FEUI, 2014

Rather than just relying on support from the government/regulator, credit rating agency must keenly approach and market their product to bank. They need to convince the bank that their credit rating may benefit the bank's efficiency and profitability in the future. For instance: the use of SME credit rating can be performed through a direct lending to SME scheme or an indirect lending scheme through a non-bank or large corporation (supply chain financing), both of which will reduce the non-performing loans.

Government/SME office needs to do dissemination and socialization program as well as direct involvement (e.g. coaching program, training program) to SME about the usefulness of such credit rating. Not only it upgrades the SME capacity, but the rating also improves their financial capability to get more access from the bank.

Rather than relying heavily from the government effort, participation from private sectors in this matter is also important. In this case an active contribution from the SME Association or Chamber of Commerce or other Private Institutions in their dissemination and socialization programs as well as direct involvement (e.g.

business coaching, business networking) will also assist the implementation of guiding principles among SME.

Depending on authority and regulatory regime in each country, regulators, including Central Bank, Monetary Authority, or Financial Service Authority also play an important role for the implementation of the principles. Their involvement through socialization and facilitation programs as well as providing incentive to bank is crucial.

Bank's Association is another relevant party that plays a significant role in the implementation of the principles. Apart from agreeing and/or approving the indicators being used in the rating system, they also involve in socialization to their member banks.

Last but not least, ASEAN SME – WG may escalate and bring about this issue to a higher level such as ministerial meetings, SOM meetings so as to further advance the implementation of this guiding principle in AMS.

7.1. Conclusion

In general, SME play a major role in social and economic development of ASEAN countries. They significantly contribute not only to GDP, firm's establishment and export, but also to domestic employment and in turn to income generation of the people.

However, unlike the large establishments, the development of SME often face many challenges, and access to external source of finance is being one of the criticals. This problem arises mainly due to information asymmetry between the potential lenders and SME borrowers. In brief, before extending the loans, potential lenders (e.g. banks, non-banks) need additional information that best elucidates the creditworthiness of SME. Here is the central role provided by SME credit rating, that supplies such information to the lenders.

At the implementation stage, establishing a credit rating system for SME depends highly on SME characteristics and its landscape, as well as the development of credit rating infrastructure in the country.[6] As a matter of fact, there exists a substantial degree of variation on these issues among ASEAN countries. At the very basic, there are considerable variations with respect to definition of SME, not only in criteria variables employed (e.g. asset per annum, sales per annum, capital, number of worker), but also the threshold value for each variable[7]. Furthermore, some countries have even sectoral SME definition (e.g. manufacturing, service, or agriculture), while others apply it across the board. This of course, will complicate the comparison of SME among ASEAN countries.

In addition to that, the development of credit rating infrastructure in their financial system, is also varied among ASEAN countries. Malaysia and Singapore are two ASEAN countries that already have well-developed financial system and hence an extensive SME credit rating infrastructure, as both have adequate sources of

[6] Credit rating infrastructure implies the existence of regulators, rating agencies, rules and laws

[7] The threshold value is normally denominated in local currency. A comparison among ASEAN countries requires a common currency denominator, typically which is USD, and depends on the exchange rate of the local currency to USD.

information and credit rating agencies that conduct a specific rating for SME. There are other three ASEAN countries that have fractional infrastructure of SME credit rating – not implemented yet (e.g. not approved yet by the regulator, at the pilot stage or about to start) the system, including: Thailand, Indonesia, and Philippines. These countries mostly rely on SME credit and financial information from single source, e.g. central bank or national credit bureau, and currently their credit rating agencies are in the stage of developing specific methodology of rating for SME.

The rest, consisting Brunei Darussalam, Cambodia, Laos PDR, and Vietnam have only limited infrastructure of SME credit rating. In these countries, although credit information is already available, there are no credit rating agencies that conducted the SME rating, most of which is conducted internally by the commercial banks. Finally, Myanmar is the only ASEAN country that has not developed SME credit rating infrastructure at all.

Thus, considering variations in SME characteristics and its landscape, and institutional settings in ASEAN countries, and to possibly further advance the financial sources for SME development in the region due to a more integrated AEC, there is a need to develop a benchmark for SME Credit rating methodology for AMS. The benchmark covers at least eligible criteria for SME and a comparable minimum standard for rating methodology to create objectivity and transparency for all stakeholders. However, taking into account different characteristics of each country, the benchmark still allows for supplementary country specific factors to be included.

7.2. Recommendation

The study proposes a benchmark for SME credit rating methodology in ASEAN as follows:

1) Eligible criteria for SME to be rated

The eligible criteria for SME to be rated is an **un-bankable and registered SME with at least 2 years of operation.** The study defines un-bankable as SME that never have commercial credit/lending facility from bank. The main motivation to propose such criterion is to attract new SME into the banking system (additional principle), rather than just competing for the existing bankable SME. In addition, in order to be eligible for rating SME must be officially registered or recorded. A registered SME also implies that it is a formal and legitimate business entity rather than informal. The SME to be rated has to be at least 2 years of operation, in order to reflect sustainability of the SME business.

2) A benchmark for SME credit rating methodology in ASEAN

a. Indicators for the rating

The study proposes to separate indicators employed in SME credit rating methodology into two aspects: non-financial and financial aspect. They are as follows:

- **Non-Financial** aspects contain indicators such as: (i) management character and management experiences, (ii) sales compositions and business conditions, (iii) history of the company, (iv) age of company, (v) industry or business sector, (vi) (vii) innovation initiative, (viii) payment habits, and (ix) government policy.
- **Financial** aspects contain indicators such as: (i) profitability, (ii) solvency or stable financial debt, (iii) liquidity and cash flow, (iv) asset or collateral, (v) average balance in financial institution (e.g. bank, non-bank).

b. Credit rating methodology

Owing to the variations among ASEAN countries, the study proposes a **cluster approach** in adopting and applying the methodology depending on the development of financial system and hence, SME credit rating infrastructure in the country. There are three clusters proposed: a) cluster 1, a well-developed SME credit rating system like in Singapore and Malaysia; b) cluster 2, a fractional SME credit rating system as in Thailand, Indonesia, and Philippines; and finally, c) cluster 3, the least developed infrastructure including: Brunei Darussalam, Cambodia, Myanmar, Laos PDR, and Vietnam. The proposed methodology and weight for different indicators in each cluster is presented in Table 7.1 below.

Table 7.1. Proposed Benchmark SME Credit Rating Methodology for ASEAN

Component	Cluster 1	Cluster 2	Cluster 3
Member of Country	Singapore and Malaysia	Thailand, Indonesia, and Philippines	Brunei Darussalam, Cambodia, Laos, Myanmar, and Vietnam.
Financial Report Requirement	Audited Financial Statement	Simple Financial Statement (unaudited)	Simple Financial Statement/Financial Information
Type	Credit Rating	Fractional-Credit Rating	Credit Scoring
Alternative model to be employed	- Altman Z-Score - Ohlson O-Score (Logistic Regression) - Artificial Neural Network (ANN) - Survival Model - Poisson Intensity	- Altman Z-Score - Ohlson O-Score (Logistic Regression)	Simple Credit Scoring (weighted for several indicators)
Proposed weight	Financial: ≥ 60% Non-financial: ≤ 40%	Financial: 30% - 40% Non-financial: 60% - 70%	Financial: ≤ 30% Non-financial: ≥ 70%

Source: LPEM FEUI, 2014

By taking cluster 2 as a base and assuming weight of financial aspect and non-financial aspect is 40: 60, the proposed weight for detailed indicators of SME credit rating is as follows:

Table 7.2 Proposed Weights for ASEAN SME Credit Rating

Indicators	Weights
I. Non- Financial Aspects	**60%**
a. Business Aspect	
Industry or business sector	9%
Business condition/sales condition	10%
Government policy	2%
b. Management Aspect	
Management character and experiences	10%
History of the company	3%
Age of company	3%
Innovation initiative	5%
Payment habits (frequency, experiences of delays/defaults)	18%
II. Financial Aspect	**40%**
Profitability (net profit margin, ROA)	4%
Solvency ratio and stable financial debt (debt to equity ratio, debt to total asset)	8%
Liquidity and cash flow (current ratio, quick ratio)	10%
Asset or collateral	10%
Average balance in financial institution (e.g. bank, non-bank)	8%
Total	**100%**

Source: LPEM FEUI, 2014

For different clusters, some minor adjustments are required, depending on the economic structure in each country.

c. Rating scale

As a benchmark for ASEAN SME Credit Rating, **the study proposes to apply 8 rating scales**. The scale could be in the form of number (e.g. 1 to 8), letter (e.g. AA to D) or combination of both (SME1A to SME4B). In principle the highest scale (e.g. 1, AA or SME1A) represents SME with the lowest probability of default or highest quality of credit and the lowest scale (e.g. 8, D or SME4B) correspond to SME with the highest probability of default or lowest credit quality.

d. Credit Rating Institution Business Model

Following Deb and Murphy (2009), the study proposes to employ **a subscription or investor-pay model and combine it with a subsidy from government**. It is important to note that the subsidy must be associated to a certain key performance indicators and/or time.

The benefits of this model are two folds. Firstly, it may tackle the problem of income source for the rating agency due free riding activities and/or if only small portion of investors/lenders are interested to finance SME. Thus, under this system, the capital structure and revenue stream of the rating agencies are clear and open to inspection. Secondly, it also eliminates the conflict of interest between rating agency and the firms being rated and hence incentives to inflate the ratings.

e. Criteria for SME Credit Rating System: the Information and Regulation

Depending on the authority and regulatory landscape in each country, the availability of different information sources for confirmation purposes and for better learning risk profile of the SME is imperative. These sources may come from: public registry offices, such as legal permit (e.g. company deed), business license (e.g. retail or distributor license), utilities payment (electricity, water and gas), pension fund, depository insurance agency, and privates companies (credit card companies, private database companies).

These sources of information complement the financial information obtained from the SME, as it typically captures the non-financial aspect indicators of the SME. For instance, information on legal permit such as company deed and type of business license may describe how long the company has been established (i.e. history and age of the business), management team and its business legitimacy. Payment habit of the SME can be justified from their utilities (electricity, water, telecommunication and gas) and/or pension fund insurance premium payment pattern.

In addition, to support the establishment of well-developed SME Credit Rating System in ASEAN, some related regulations regarding SME credit rating infrastructure should be enacted, which include:

- **Regulation on credit rating agencies.** All credit rating agencies within ASEAN countries have to be registered and accredited by the banking or financial authorities in each country. Currently, most of ASEAN countries that establish credit rating infrastructure, albeit partially have issued such regulations.

- **Regulation on accessing and processing data and information** for credit reporting or credit rating. In order to assure fairness, accuracy and privacy in the practice of credit reporting business by credit rating agencies, regulations on accessing and processing data and information have to be issued by the government in each country. Not only that, regulation on exchange of information across border should also be considered among ASEAN countries.
- **Regulation for other information provider** outside the financial system (e.g. local government, related ministries) should also be established especially concerning issues on sharing the private information to be accessed by the rating agency.
- **An incentive regulation to encourage the utilization of external credit rating for SME** for stakeholders should also be adopted and implemented in each country. For instance, Central Bank or Financial Service Authority might relax the banking prudential regulation on risk weighted asset (RWA) if the banks use external credit rating for SME loan. Another kind of incentive regulation is to attach SME credit rating with another government's SME credit programs, such as credit guarantee program. Incentive regulation could also be given to SME being rated, in the form of a subsidized rating fee.
- **Policy coordination for SME development within each country and among AMS.** In order to better develop SME in each ASEAN countries, there should be a powerful government institution that coordinates policies and regulations related to SME. Such institution must also build a strong and harmonious communication with its counterpart in ASEAN.

f. The Business Process of SME Credit Rating: Direct scheme vs. Indirect scheme

In practice, there are two alternative schemes of the SME credit rating use, namely the direct and indirect schemes. The direct SME loan scheme consists of three interrelated parties, namely the Bank, the SME credit rating agency and the SME. In this scheme, the initiative to use credit rating may come either directly from the SME that already realizes its importance and benefit of the rating for loan approval, or from the bank that requires the SME to be assessed for loan approval.

In the indirect scheme involves additional party that is a large corporation or non-bank institution which has direct business relationship with the SME is involved. In this scheme, the bank entails the large corporate or non-bank institution to conduct SME credit rating before channelling credit to SME. This scheme is typically occurred in supply chain financing or linkage financing through an intermediary institution.

g. Building Awareness: Parties involved

The successful implementation of this benchmark methodology (guiding principles) is greatly relied on the dissemination and acceptance (gain approval) from relevant stakeholders in the AMS. The relevant stakeholders in this case may include credit rating agencies, regulators, government/SME office, chambers of commerce/SME association, bankers association, as well as in the SME Working Group in ASEAN. An active contribution from each of these parties will better implement the benchmark in each country.

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