

THE EFFECT OF CORRUPTION PERCEPTION INDEX AND COUNTRY RISK INDEX FOR SYNDICATED LOAN ESTABLISHMENT AND STRUCTURE IN ASIA 1999-2003

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Abstract

This paper tests whether the corruption perception index (CPI), and country risk index, both being macro economic variables, could affect the lead arranger decision for syndicated loans or the size allocation for syndicated loans.

In this research, we use logit methodology to analyze the lead arranger decision to approve a syndicated loans application. To analyze the size determination, we use tobit model analysis. The sample for this research came from all recorded loan transaction in Asia during the period 1999-2003. To strenghten the research analysis, we also apply robustnest check with an ordinary least square method.

From this research, it is showed that the lead arranger consider their reputation and certification effect as an important factor that lead them to prefer a low risk syndicated loans. For size determintation, lead arranger will decide larger size for a higher risk loan, since they expect a higher return as a risk compensation for the investment.

Keywords: corruption, country risk, loan, syndication

A. Introduction

A syndicated loan according to Armstrong (2003) is a type of loan that is provided by at least two lenders to provide financial capital for one borrower. In syndicated loans, there is a lender that plays the role of lead arranger, while the others take a role as participating lenders, with both having different roles and functions (Sufi, 2004). Lead arrangers will arrange the whole process for syndicated loan. After the borrower and the lead arranger have come to agreement, the lead arranger will launch the deal to invite other investors (Dennis and Mullineaux, 1999).

The unique factor of syndicated loans is that the transaction is a combination of relationship and transactional banking (Altunbaset *al.*2009), Dennis and

Mullineaux,1999). Relationship banking is a long term relationship between borrower and lender, where the lender continually gathers information regarding the borrower, in order to minimize the risk of agency problem, moral hazard and adverse selection that involved in syndicated loan. Meanwhile, the transactional banking is a relationship between lender and borrower for a short-term relation and the information needed is project based information.. Based on those two relationships, the lender and borrower relationship in syndicated loan is in relationship banking context, and while the syndicated loan proportion from several lenders is in transactional banking context.

Commencing during the 1970s, syndicated loans represented a small proportion of money to lent. By 1982, the total amount reached \$46 billion, and kept growing from 1990s until 2003, with a total transaction \$1.6 trillion. The growing rate showed how syndicated loans had become an important financial capital source for companies.

This phenomena attracted Godlewski and Weill (2007), Jones *et al.*(2000) to do research on lender motivation to syndicate their loans. The first reason is to diversify the credit risk and their income. The second reason is to avoid bank regulation related to maximum loan limit for one borrower, and the third reason is to give an opportunity for a lender with less capability arranging an agreement, and the fourth one is to improve the reputation of the lead arranger.

Some research conducted by Dennis and Mullineaux (1999), Marciano (2003), also Godlewski and Weill (2007) concluded that syndicated loan had two problems with the loan agreement arrangement, which are agency issue, and asymmetric information issue.

The asymmetric information issue emphasised the differences ofn information control between the lead arranger and participant lenders that caused adverse selection problem. The other issue, moral hazard shows the lack of agent commitment to pursue the principal objective, in this case the lead arranger as the agent, did not perform optimally using the authority that has been delegated by the participant lender.

To describe the moral hazard on this research, we will use the corruption perception index (CPI), since the corruption perception index of a country also represent the borrower's moral hazard. The high rate of corruption perception index shows the common practice of bribe and misused fundings in the bureaucrat, which could lead to borrower false action such as issuing a misleading financial report, false tax report, etc. This situation could produce a higher risk level for loan assessment. If a lead arranger provides syndicated loans to a country with high corruption perception index, it means that the lead arranger did not distribute the moral hazard risk to the participant lender.

The previous argument is supported by Leland and Pyle (1977), which said that there is a tendency for the lead arranger to syndicate loans with a higher moral hazard. On the contrary, other research conduct by Dennis and Mullineauz (1999), shows that the higher the moral hazard leads to a lower the possibility for the lead

arranger to syndicated loan, since they are concerned about their reputation and certification level.

Corruption Perception Index shows the perception of a country, rated from 0-10, based on survies among the businessman and analyst in particular country. The 0 scale means that businessmen and analyst in particular country have a very high corruption perception, while the 10 scale means the opposite.

Other than moral hazard issues, the lenders will also need to evaluate credit risk. A credit risk is a risk of borrower's incapability to perform their duties as stated in loan agreement (Jorion, 2002; p.16, Heffernan, 2008; p.104, Eaton *et al.*, 1894). Based on Damodaran (2003), a country risk could also describe the credit risk level of the borrower, and the credit risk will grow according to the business risk in a country. Several business risks that could be complicated are political stability, government policy in business, etc. Other research on credit risk by Dennis and Mullineaux (1999), Godlewski and Weill (2007) stated that a higher credit risk in a company credit rating will motivate the lead arranger to approve syndicated loans.

The definition for a country risk is an index to estimate a risk of a country based on their credit and political stability risk, with an interval from 0-7, with the scale of 0 indicate the lowest rate for a country risk, while the scale of 7, indicate the highest country risk rate.

Most research to analyzing moral hazard and credit risk, usually use firm specific data (Dennis and mullineaux, 1999; Nigro, *et al.* 2000; Sufi, 2004; Mody and Ichengreen 2000). Research with country specific data (Godlewski and Weill 2007) is realtively rarely. That is why we will use country specific data, such as corruption perception index (CPI) and country risk. This is relevant since in macro economic theory, the aggregate macro economic behavior could be seen in macro economic dynamic (Case and Fair, 2005), and it is necessary to use macro economic performance as a consideration for lenders to approve syndicated loans to a borrower in a particular country.

B. Literature review

B.1. The relations between corruption perception index and syndicated loans

The corruption perception index of a country could affect the lender arranger decision whether to approve or refuse a syndicated loans application, as well as affecting the size involved. This is relevant with the fact that in micro economic theory, the aggregate micro economic behavior could be seen in macro economic dynamic (Case and Fair, 2005).

Corruption is a person or firm behavior to take a personal advantage or also a group advantage from a company transaction, by misuse his authority or power that caused a country to suffer a financial lost (Ardisasmita, 2006).

Corruption could be done in terms of: (1) causing financial lost to a country (2) bribery (3) fraud (4) black mail (5) cheating (6) conflict of interest (7) gratification

Corruption in Indonesia also being regulated in Law of the Republic of Indonesia No. 31/ 1999 jo. No. 20/ 2001 and considering any actions below as a corruption action

1. Interfering in corruption case.
2. Keep silent or giving misleading information related to a corruption case
3. Bank policy to protect their client account
4. Witness that giving a false testimony
5. A professional protecting their client information or giving a false testimony
6. A witness that reveal the informant identity

The high rate of corruption perception index shows the common practice of bribe and misused fundings in the bureaucracy, which could lead to illegal borrower actions such as issuing a misleading financial report, false tax report, , that is against the Law of the Republic of Indonesia No. 31/ 1999 jo. No. 20/ 2001. When the borrower performs those actions, there is the potential for high moral hazard, and will cause financial lost for a country, or could impact on financial loss for the lenders.

Based on this explanation, the borrower moral hazard rate is one of the factors that need to be considered by the lenders for syndicated loans. Faced with this situation, the lenders have a dilemma between syndicated the loans to diversify the risk, or self financing the loan in order to maintain their reputation.

There are still a lot of factors that need to be further discussed about the impact of the moral hazard on lead arranger decision making for syndicated loans since the theories and empirical study shows different results. In Leland and Pyle (1977), “the more favorable the insider’s information, the larger the number of shares they retain”. Leland and Pyle (1977) stated that there is support evidence that the higher risk involve in a loan, the lead arranger will diversify/ divide/ reduce the risk. It means that the lead arranger will choose to syndicate loans in a case where the borrower have a high moral hazard risk, and will prefer to do self financing the loan for a borrower with a low moral hazard risk.

Meanwhile empirical studies conducted by Jones, *et al* (2000); Dennis and Mullineaux (1999) shows a different result from Lyland and Pyle (1977), where the lead arranger will choose not to syndicate loans for a borrower with a high moral hazard in order to maintain their reputation (Jones, *et al.* 2000).

A proxy level for a country corruption rate is represented by CPI. CPI could give a description of the borrower moral hazard rate, as indicated by Case and Fair (2005) who state that the aggregate micro economic behavior could be seen in macro economic dynamic. CPI itself shows the perception rate in a country, from 0-10, based on survey among the businessman and analyst in particular country. The 0 scale means that the businessmen and analysts in particular country have a very high corruption perception, while the 10 scale means the opposite. A lower CPI means a higher moral hazard rate and higher chance that the loan will be syndicated, while a lower moral hazard rate also reduce the opportunity that the loan will be syndicated.

H1 :CPI have a negative relationship with syndicated loans decision

There are still a lot of factors that need to be further discussed about the impact of the moral hazard on syndicated loans size since the theories and empirical study shows different results. In Leland and Pyle (1977), “the more favorable the insider’s information, the larger the number of shares they retain”. Leland and Pyle (1977) stated that the higher risk of the borrower’s moral hazard, the lead arranger will form a bigger syndicate, while for a low moral hazard risk the lead arranger will form a smaller syndicate.

While on the research conducted by Jones, *et al.* (2000) it is clear that the lead arranger also consider their reputation and certification effect for syndicated loans decision. It means that according to Jones, *et al.* (2000), the lead arranger will form a smaller syndicate when facing a higher risk of moral hazard, and will form a bigger syndicate when facing a lower risk of moral hazard.

A proxy level for a country corruption rate is represented by Corruption perception index or CPI. CPI could give a description of the borrower moral hazard rate, like what Case and Fair (2005) said that the aggregate micro economic behavior could be seen in macro economic dynamic. CPI (corruption perception index) itself shows the perception rate in a country, from 0-10, based on survey among the businessman and analyst in particular country. The 0 scale means that the businessman and analyst in particular country have a very high corruption perception, while the 10 scale means the opposite. A lower CPI means a higher moral hazard rate and a higher size of the syndicate, while a lower moral hazard rate will also also reduce the size of the syndicate.

H2 : CPI have a negative relationship with size determination for syndicated loans.

B.2. The relations between country risk and syndicated loans

In their book, Jorion, (2002; p.16), Heffernan, (2008; p.104), Eaton *et al.*, (1894) it is stated that a credit risk is a risk of borrower’s incapability to perform their duties as stated in loan agreement, which means that the borrower could not paid the loans because of bankruptcy, or late payment for loan’s interest. This situation is explained by Hanafi (2009) caused by external environment uncertainty. Damodaran (2003), also stated that the credit risk is highly related with the business risk where the borrower conduct their business. As a conclusion, the higher credit risk rate for a country, also represent the higher credit risk rate for the borrower.

A proxy level for a country credit risk could be seen from the country risk rate. Country risk is an index to estimate a risk of a country based on their credit and political stability risk, with an interval from 0-7, with the scale of 0 indicate the lowest rate for a country risk, while the scale of 7, and indicate the highest country risk rate. The higher country risk rate shows the higher external environment uncertainty, which lead to a higher credit risk for the lenders. When the credit risk rate of the borrower increasing, then the lead arranger tend to not syndicating the loans, and vice versa. It is align with theory said by Lyland and Pyle (1977), stated that

disadvantage information, in terms of country risk, will affect the lead arranger decision to syndicating the loans.

H3 :country risk have a positive relationship with the lead arranger decision to syndicating the loans

In their book, Jorion, (2002; p.16), Heffernan, (2008; p.104), Eaton *et al.*, (1894) it is stated that a credit risk is a risk of borrower's incapability to perform their duties as stated in loan agreement, which means that the borrower could not paid the loans because of bankruptcy, or late payment for loan's interest. This situation is explained by Hanafi (2009) caused by external environment uncertainty. Damodaran (2003), also stated that the credit risk is highly related with the business risk where the borrower conduct their business. As a conclusion, the higher credit risk rate for a country, also represent the higher credit risk rate for the borrower.

A proxy level for a country credit risk could be seen from the country risk rate. Country risk is an index to estimate a risk of a country based on their credit and political stability risk, with an interval from 0-7, with the scale of 0 indicate the lowest rate for a country risk, while the scale of 7, and indicate the highest country risk rate. The higher country risk rate shows the higher external environment uncertainty, which lead to a higher credit risk for the lenders. When the credit risk rate of the borrower increasing, then the lead arranger tend to self financing the loans, and when the credit risk rate of the borrower decreasing, the lead arranger will form a bigger size of the syndicate. It is align with theory said by Lyland and Pyle (1977), stated that disadvantage information, in terms of country risk, will affect the lead arranger decision to syndicating the loans.

H4 : country risk have a positive relationship with size determination for syndicated loans.

B.3. Control Variables

Godlewski and Weill (2007) stated that the use of a ticker shows he borrower transparency rate, and could reduce the monitoring cost. The first thing that we will discuss is transparency, an assumption related to the efficiency to access information and data about the borrower. Especially for a public company listed in a stock exchange, it is cumpolsary to issue a financial statement periodically and to issue a report to the public regarding the corporate action that has been taken. These procedures will make the information gathering about the borrower become easier. For participant lender, this also could reduce the moral hazard risk since they could also access information outside the information gathered by the lead arranger. This situation will also affect the lead arranger decision making in terms to prioritize a syndicated loans for public company that is listed in stock exchange, as it is more favorable for participant lender in terms of information transparency.

Other than that, in Mulleneaux, Dennis (2000), it is also stated that a public company that is listed in stock exchange could also reduce the monitoring cost. With a periodic financial statement and corporate action report, it will be easier for the

lenders to check the borrower's performance, which will make the lead arranger prefer to syndicate the loan.

The impact of maturity role is also still confusing (Weill, Godlewski (2007)). In Dennis and Mullineaux (1999) research, they conclude that if there is a significant potency from the lead arranger to perform moral hazard in syndicated loans, then a short term maturity syndicate could minimize the problem. It is because a short term maturity syndicate will results in a more frequent due time payment extension request by the borrower, and cause a more frequent monitoring activities by the participant lender, which in the end could help to minimize the moral hazard issue, so that the lead arranger will syndicate the loan.

But in other side, the more frequent monitoring activities will also results in a higher monitoring cost. In Diamon (1984) it is stated that in a syndicated loans usually will involve a duplicative monitoring cost. If this is relevant, then a long term maturity will reduce the lead arranger potency to syndicate the loan, and vice versa.

The definition of collateral in Winton and Rajan (1995) is as a "specific assets pledged as security for a loan". Collateral is use to reduce or increase the potency for syndicate the loan. Bester (1985), Besanko and Thakor (1987) stated that the borrower could have a good credit risk quality by offering a collateral. It is also explained that when a loan already fully secured, then the monitoring quality by the lead arranger is become less important. Collateral could also reduce the sensitivity of a loan cash flow in dealing with different information control among the lead arranger and the participant lender, which means that with collateral the borrower will be more likely to get a syndicated loans.

Berger, Udell (1990) associated collateral with a riskier loans, since collateral usually are found in a loan transaction that need more monitoring. If collateral really play an important role to solve the moral hazard problem, then the higher risk that the borrower have, means that he will need more collateral. In the contrary, they believe that collateral will only reduce the opportunity for syndicated loans.

The other problem about the maximum limit amount of loan that could be given for one borrower, and the need to diversify the portfolio to reduce the credit risk, will also affect the possibility for syndicated loans. This could be measure from the total amount of loan in one loan agreement. The higher total amount of loan means the higher potency for syndicated loans since the lead arranger will have issue about loan amount limitation and also credit risk issue (Dennis and Mullineaux (1999)).

C. Method

C.1. Variable operational definition

CPI	corruption perception rate in a country based on survey among the businessman and analyst in particular country
COUNTRY_RISK	country risk index based on credit risk and political instability risk in particular country
LISTED	dummy variable that have a value as 1 (one) if the borrower company listed in stock exchange (go public)

	company), and the value is 0 (zero) if it's not listed in stock exchange (private company).
Log (AMOUNT)	logarithm of loan amount in US dollar denomination.
TENOR	variable that indicate the time period for a loan (monthly)
SECURED	dummy variable that have a value as 1 (one) for a loan with collateral, and the value is 0 (zero) for a loan without collateral
INDUSTRY	a group of dummy variable consist of 9 type of industries based on the borrower SIC primer code, as categorized below: <ul style="list-style-type: none"> a) 0 (zero) Agriculture, forestry, fishery. b) 1 (one) Mining (i.e. : metal, gold, silver, oil, gas mining), non-residential construction (i.e. :water, electricity, communication, water pipe), and residential construction. c) 2 (two) Manufacture industry for food and beverage, cigarette, textile, garment, furniture, paper, plastic, magazine, publisher, chemistry products, cosmetic. d) 3 (three) Manufacture industry for car tire, plastic products, leather products, gypsum, cement, steel, machinery and construction equipment, electronic equipment, communication equipment, transportation spare part, optical equipment, laboratory, musical instrument, jewelery, sports equipment, office equipment, children toys e) 4 (four) Transportation and public facilities. f) 5 (five) Grocery. g) 6 (six) Insurance, real estate, financial investment h) 7 (seven) Hotel, motel and service (i.e.: advertising, computer programming, video rental company, tourism spot). i) 8 (eight) Service (i.e.: hospital, medical laboratory, education, and consultant)

YEAR	a group of dummy variable that shows the year of loan transaction. Y99 means that the transaction happen in 1999, while Y2000 means it happen in 2000, etc.
COUNTRY	indicate a group of dummy variable that shows the country of the borrower's origin, i.e.: China, Hongkong, India, Indonesia, Japan, South Korea, Malaysia, Philipines, Singapore, Taiwan, Thailand, Vietnam.
SYNDICATED	dummy variable with a value of 1 (one) for syndicated loans, and 0 (zero) for loans that is not being syndicated.
NUMBER	variable amount of the lenders involve in a syndicate

C.2. Data

Data that are used for this research are a secondary data, gather not from the first source i.e. survey and direct interview, but came from internet, etc. The data source on this research came from Dealscan database and Osiris database. For the loan transaction data, we gather the information from Dealscan database, while for loan transaction data for big corporation; we gather it from Loan Pricing Corporation (LPC). LPC is a private company that collects all loan transaction for their institutional client. Dealscan also have historical database information consist of price and loan agreement information more than 15 years ago. And for company status whether they are listed in stock exchange or not, are collected from Osiris database that could be access from Universitas Surabaya elibrary.

C.3. Data Processing and Hypothetical Test

The procedure for data processing is started by making a dummies variable as below: (1) LISTED (2) SECURED (3) TENOR (4) INDUSTRY (5) SYNDICATED (6) COUNTRY (7) YEAR. After that the logarithm calculation will process the AMOUNT variable for a smaller result, and will combine those data with NUMBER variable. After all the nada needed has been collected, then we will use it to test the model in two groups, i.e.: (1) all loans transaction (2) syndicated loans transaction. The model for testing will be adjusted based on data collected for each group.

The first test for all loans transaction is to see whether the moral hazard and credit risk factors will affect the lead arranger decision to syndicated loans. In this test, industry independent variable SIC 0 and period independent variable is T1999 are the constanta. The model could be seen below:

$$SYNDICATED = \beta_0 + \beta_1 CPI + \beta_2 TENOR + \beta_3 SECURED + \beta_{year} PERIOD + \beta_{SIC} INDUSTRY + \beta_6 \text{Log} (AMOUNT) + \beta_7 TICKER$$

$$SYNDICATED = \alpha_0 + \alpha_1 COUNT_RISK + \alpha_2 TENOR + \alpha_3 SECURED + \alpha_{year} PERIOD + \alpha_{SIC} INDUSTRY + \alpha_6 \text{Log} (AMOUNT) + \alpha_7 TICKER$$

The second test for syndicated loans is to see whether the moral hazard and credit risk factors will affect the size of loans. In this test, industry independent

variable SIC 0 and period independent variable is T1999 are the constanta. The model could be seen below:

$$\text{NUMBER} = \sigma_0 + \sigma_1 \text{CPI} + \sigma_2 \text{TENOR} + \sigma_3 \text{SECURED} + \sigma_{\text{year}} \text{PERIOD} + \sigma_{\text{SIC}} \text{INDUSTRY} + \sigma_6 \text{Log (AMOUNT)} + \sigma_7 \text{TICKER}$$

$$\text{NUMBER} = \varepsilon_0 + \varepsilon_1 \text{COUNT_RISK} + \varepsilon_2 \text{TENOR} + \varepsilon_3 \text{SECURED} + \varepsilon_{\text{year}} \text{PERIOD} + \varepsilon_{\text{SIC}} \text{INDUSTRY} + \varepsilon_6 \text{Log (AMOUNT)} + \varepsilon_7 \text{TICKER}$$

C.4. Data Processing Method

This research using two models, logit and tobit to estimate the determinant factor for syndicated loans in multivariate context (Winarno, 2009). The logit model is a regression model use to analyze a dependent variable with a possibility between 0 and 1 (Winarno, 2009). The logit could be different based on the data. Two types of logit analysis is an individual data and a group data.

The tobit model is use to analyze using different information to form two unequal group of data (Winarno, 2009). The dependent variable is called censored model with a limited condition.

Heterokedasticity is controlled using White method (1980). White (1980) reduce heterokedasticity consistent covariance matrix estimator and provide the right estimation for varians coefisien, when there is an unknown heterokedasticity.

D. Analysis

D.1. Descriptive Statistic

Data on table 1 shows the data division of 673 corporate loans in Asia during 1999-1999-2003. The total data of loan transaction are divided by syndicated loans and non syndicated loans. There are 486 syndicated loans, or 72,21% from the total transaction, while there are only 187 non syndicated loans or 27,79%. The composition between borrower that are listed in stock exchange, and those who are not listed, is almost equal. There are 335 or 49,77% out of 673 companies that are not listed in stock exchange, while there are 338 or 50,22% companies that are listed in stock exchange. For the borrower that are listed in stock exchange, there are 246 or 72,78% out of 338 companies that involved in syndicated loans. While there are only 92 or 27,22% companies with non syndicated loans. And even for the borrower that are not listed in stock exchange, 71,64% or 240 companies out of 335, are involved in syndicated loans, while there are only 28,36% or 95 companies that involved in non syndicated loans. From a total of 673 borrower that involved in loan transaction, there are 43,38% or 292 companies with collateral, while 56,61% or 381 companies did not provide collateral for loan transaction. From 292 companies that provide collateral, there are 224 companies or 76,71% syndicated loans and there are only 92 companies or 27,22% with non syndicated loans. From 381 companies that did not provide collateral, there are 262 companies or 68,77% syndicated loan, and there are only

119 companies or 31,23% with non syndicated loans. **Table 1**
Descriptive Statistic on corporate loans in Asia 1999-2003

	All	syndicated loans	non syndicated loans	Syndicated loans (%)	Non syndicated loans (%)
number of tranches	673	486	187	72,21%	27,79%
<i>syndicated loans</i>	486	486	-	-	-
<i>non syndicated loans</i>	187	-	187	-	-
<i>non listed</i>	335	240	95	71,64%	28,36%
<i>listed</i>	338	246	92	72,78%	27,22%
<i>secured</i>	292	224	68	76,71%	23,29%
<i>non secured</i>	381	262	119	68,77%	31,23%
<i>industry</i>					
inds0	10	8	2	1,65%	1,07%
inds1	55	49	6	10,08%	3,21%
inds2	91	57	34	11,73%	18,18%
inds3	168	128	40	26,34%	21,39%
inds4	292	215	77	44,24%	41,18%
inds5	17	12	5	2,47%	2,67%
inds6	14	6	8	1,23%	4,28%
inds7	17	5	12	1,03%	6,42%
inds8	9	6	3	1,23%	1,60%
<i>period</i>					
T1999	170	122	48	25,10%	25,67%
T2000	173	125	48	25,72%	25,67%
T2001	167	118	49	24,28%	26,20%
T2002	90	72	18	14,81%	9,63%
t2003	73	49	24	10,08%	12,83%
<i>CPI</i>					
mean	5,11	5	5,4	-	-
median	5	4,5	5	-	-
Max	8	8	8	-	-
Min	4	4	4	-	-
st.dev	1,40	1,28	1,72	-	-
<i>country risk</i>					
mean	1,83	1,74	2,08	-	-
median	2	2	2	-	-
Max	6	6	6	-	-
Min	0	0	0	-	-
st.dev	1,49	1,39	1,69	-	-
<i>number of lender</i>					
mean	5,88	7,76	1	-	-
median	4	6	1	-	-
Max	45	45	1	-	-
Min	1	2	1	-	-
st.dev	5,75	5,75	0	-	-
<i>tenor</i>					
mean	67,21	67,10	67,49	-	-
median	60	60	60	-	-
Max	360	360	300	-	-
Min	1	2	1	-	-
st.dev	47,35	46,40	49,87	-	-
<i>Amount(million \$)</i>					

mean	263,98	306,77	152,76	-	-
median	110,00	125,00	90,00	-	-
Max	12000,00	12000,00	2252,00	-	-
Min	1,6	6,52	16,00	-	-
st.dev	738,86	853,95	231,53	-	-

Table 2
Descriptive Statistic on robustness check in Asia 1999-2003

<i>Number of tranches</i>	274
Rate	
Mean	146,03
Median	125
Max	600
Min	19
st.dev	90
Fee	
Mean	74,03
Median	60
Max	390
Min	0
st.dev	61,74

Data in table 2 shows that there are 274 data use in robust check. The mean is 146,035, median is 125, maximum rate is 600, minimum rate is 19 and standard deviation is 90. For the average rate fee is 74, median 60, maximum rate is 390, and minimum rate is 0, and standard deviation is 61.74.

D.2. Model Testing

This model testing are divided to 4 models using software reviews. The 1st and 2nd tests using logit, while the 3rd and 4th tests using tobit. The 1st and 2nd test are to see whether the CPI and country risk affect lead arranger decision on syndicated loans, while the 3rd and 4th tests are to check whether the CPI and country risk affect the size of syndicated loans.

D.2.1. All Sample

The test result on model 1 in table 3 shows that CPI variable is significant in 1% level, with a positive coefficient. From this result, we can conclude that there is a significant relationship between CPI variable and the lead arranger decision for syndicated loans, and also there is a positive relationship between CPI variable and syndicated variable.

The significant test results with a positive coefficient shows the tendency to syndicate the loan in a country with a high CPI rate, while for a country with a low

CPI rate the loans usually are non syndicated. It means that the lead arranger tend to not syndicate the loan for borrower from a country with a high corruption rate, since corruption represents the high level of moral hazard issue. In the contrary, the lead arranger tend to syndicate the loan for borrower from a country with a low corruption index. From model 1, the result is not align with the theory from Lyland and Pyle (1977), but more supporting the empirical study by Jones, et al (2000), Dennis, Mullineaux (1999). It shows that the lead arranger did not perform portfolio diversification when they are facing a high risk moral hazard as what Lyland and Pyle (1977) stated, but the lead arranger are more concern on their reputation and certification effect according to Jones, et al (2000), Dennis, Mullineaux (1999).

In model 1 test for control secured variable, the result shows a significant positive coefficient with 1% level. It means that control secured variable have a significant and positive relationship with syndicated variable. We can conclude that the lead arranger tend to not syndicate the loan when the borrower did not provide a collateral in the loan agreement. The lead arranger also tend to syndicate the loan when the borrower provide a collateral in the loan agreement (Bester (1985), Besanko, Thakor (1987)).

Meanwhile, for the model 2 test shown in table 3, the result shows a significant negative coefficient with 1% level. It means that country risk variable have a significant relationship with syndicated loans decision making, and there is a negative relationship between country risk variable and syndicated variable.

The significant test result with a negative coefficient, shows that the lead arranger will syndicate the loan in a low country risk, and non syndicated loans will be given for a high country risk, since the lead arranger believe that a high country risk also represent a high credit risk of the borrower, and vice versa. The lead arranger decision as showed in model 2 test is not align with the theory from Lyland and Pyle (1977), but more supporting the empirical study by Jones, et al (2000), Dennis, Mullineaux (1999). This result conclude that the lead arranger did not perform portfolio diversification when they are facing a high risk business condition as stated by Lyland and Pyle (1977), but in the contrary the lead arranger are more concern to maintain their reputation and certification effect which support the empirical study by Jones, et al (2000), Dennis, Mullineaux (1999).

The test result for control secured variable on model 2 shows a significant relationship in 1% level with a positive coefficient. It means there is a significant relationship between control secured variable with the lead arranger decision to syndicate the loan, and also shows that there is a positive relationship between control secured variable and syndicated variable. This conclusion support the statement by (Bester (1985), Besanko, Thakor (1987)), that the lead arranger will prefer to syndicate the loan for a borrower that provide collateral in loan agreement, and tend to not syndicate the loan if the borrower did not provide a collateral in the loan agreement.

Table 3

Inferensial Statistic Data on corporate loans

dependen variable : syndicated

Variabel	koef reg (model1)	koef reg (model2)	Z-Value (model1)	Z-Value (model2)
CPI	0.213556***	-	4,338572	
<i>count risk</i>	-	-0.172802***		-2,610632
<i>L_amount</i>	0.098753	0.082051	1,567108	1,317041
<i>Ticker</i>	0.238479	0.183125	1,237019	0.967080
<i>Tenor</i>	-2.71E-05	-0.001161	-0.012062	-0.520479
<i>secured</i>	0.671651***	0.563045***	3,080134	2,702861
<i>T2000</i>	0.00999	0.060726	0.038808	0.238011
<i>t2001</i>	-0.112261	0.037089	-0.428340	0.143120
<i>T2002</i>	0.278015	0.480343	0.812460	1,46169
<i>T2003</i>	-0.769975**	-0.592837*	-2.182.220	-1,725821
<i>in_1</i>	1.227.736	0.970137	1,337861	1,071013
<i>in_2</i>	-0.485458	-0.773055	-0.588617	-0.961179
<i>in_3</i>	-0.024590	-0.261059	-0.030225	-0.328326
<i>in_4</i>	-0.177967	-0.261161	-0.221180	-0.331341
<i>in_5</i>	-0.259356	-0.461470	-0.261848	-0.480629
<i>in_6</i>	-1.787964*	-1.645083*	-1,852425	-1,774835
<i>in_7</i>	-2.079928**	-2.197548**	-2,168311	-2,338554
<i>in_8</i>	-0.694549	-0.693443	-0,658395	-0.677615

Note : *significant 10% ; ** significant 5% ; *** significant 1%.

D.2.2. Sample of Syndicated Loans

The test result on model 3 (Table 4) shows that the CPI variable has an insignificant relationship with a positive coefficient. It means that the CPI rate did not affect the size of syndicated loans, and the positive coefficient means that there is an indication that the higher CPI rate in a country, will also increase the number of lenders involve in the syndicate, and vice versa.

While the test result on model 3 for control secured variable shows a significant relationship with 10% level and positive coefficient. It means that the control secured variable have a significant relationship with number variable. We can conclude that the lead arranger prefer to give a bigger size of syndicated loans when there is a collateral involved, and prefer to form a smaller size of syndicated loans without a collateral in the loan agreement. The test result support the (Bester (1985), Besanko, Thakor (1987)), statement about the lead arranger decision to syndicate the loan for the borrower that provides collateral.

In model 4 test, the result shows that the country risk variable is significant in 1% level with a positive coefficient. It means that the country risk variable have a significant and positive relationship with syndicated loans. We can conclude that in a high country risk rate, the lead arranger will tend to syndicate the loan, since the lead arranger believe that a high country risk rate also represent a high credit risk of the borrower. The result in model 4 test supports the theory by Lyland and Pyle (1977), that the lead arranger will form a portfolio diversification when they are facing a high risk business condition.

Table 4
Inverensial Statistic data on syndicated loans
dependen variable : number

Variabel	koef reg (model3)	koef reg (model4)	nilai Z (model3)	nilai Z (model4)
CPI	0.062442	-	0.564083	-
<i>count risk</i>	-	0.475171***	-	2,826633
<i>L_amount</i>	0.450219	0.434747	1,536461	1,459369
<i>Ticker</i>	0.505709	0.526318	1,016934	1,069779
<i>Tenor</i>	-0.008310	-0.010534*	-1,444962	-1,831713
<i>Secured</i>	1.699823***	1.577825***	2,970244	2,82971
<i>T2000</i>	2.339462***	2.413102***	3,498688	3,647356
<i>t2001</i>	2.378359***	2.270099***	3,088182	2,921186
<i>T2002</i>	0.461827	0.717822	0,65836	1,048804
<i>T2003</i>	-1.057.478	-0.703283	-1,329114	-0.889255
<i>in_1</i>	0.016310	-0.112024	0.012344	-0.088331
<i>in_2</i>	0.938917	0.947340	0.717283	0.737308
<i>in_3</i>	1,743595	2.157277*	1,399007	1,727318
<i>in_4</i>	-0.097270	0.101942	-0.083832	0.089338
<i>in_5</i>	0.925784	1.622.047	0.520035	0.931031
<i>in_6</i>	-2,183588	-2.030.318	-1,508724	-1,489916
<i>in_7</i>	1,065478	1.171.984	0.516015	0.513595
<i>in_8</i>	-0.001008	0.122625	-0.000452	0.051903

Note : *significant 10% ; ** significant 5% ; *** significant 1%.

The other significant results from model 4 are for control tenor variable and secured. The control tenor variable is significant in 10% level, with a negative coefficient. The result shows that there is a significant negative relationship between control tenor variable and number variable. The lead arranger prefer to form a bigger size of syndicated loans if the payment settlement period is shorter. It is supporting the statement from Dennis, Mullineaux (1999) that a shorter payment settlement

period will cause the lead arranger to syndicate the loan, since the monitoring level will also increase if the borrower asks for a payment settlement period extension.

The significant test result in 1% level with a positive coefficient on model 4 also shows that there is a positive significant relationship between control secured and number variables. The result support Bester (1985), Besanko, Thakor (1987), statement that the lead arranger will prefer to syndicate the loan if the borrower did not provide collateral.

The conclusion for model 1 and 2 tests, shows that the lead arranger decision whether to syndicate a loan or not, is highly depend on certification effect consideration, as stated by Jones, *et al* (2000) and Dennis, Mullineaux (1999), which could impact the future reputation of the lead arranger. For this reason, the lead arranger will syndicate the loan with a low credit risk and moral hazard rate.

The conclusion for model 3 test is insignificant, with a positive coefficient, which shows the tendency that the lead arranger decision on syndicate size determination also affected by certification effect as in the results on model 1 and 2. But the test result on model 4 shows that if the lead arranger is facing a choice of a high credit risk loan then they will form a bigger size syndicate as stated by Lyland and Pyle (1977).

This situation also raises a question about why the lenders still want to join the syndicate eventhough they know that a high credit risk is involved. The answer could be because the lenders motivations to earn a higher return as a trade off for a higher risk condition.

D.3. The Robusnest Check test result

The result for robustnest check could be seen in table 5. Robustnest check is a test to support the main result in this research using software eviews, with a simple linear regression formula.

The test result in model 5 shows that the CPI variable is insignificant with a negative coefficient. It means that there is no significant relationship between fee variable and CPI variable, while the negative coefficient means that if the moral hazard of the borrower is high and the CPI rate is low, then the lenders will demand a bigger fee to the borrower, vice versa.

While the test result in model 6 shows that the country risk variable is significant in 1% level with a positive coefficient. It means that there is a significant relationship between country risk variable with fee variable. In a situation where the high country risk index also represents the credit risk of the borrower, then the lenders will demand for a bigger fee to the borrower, and if the country risk index is low, then the lenders will demand a smaller fee from the borrower.

Table 5

Inferensial Statistic data on robustness check

Variabel	<i>Fee</i>		Rate	
	model 5	model 6	model 7	model 8
CPI	0,4861	-	0,0396**	-
	-0,697472	-	-2,067951	-
<i>countrisk</i>	-	0,0028***	-	0,0012***
	-	3,017661	-	3,276429

The test result on model 7 shows that the CPI variable is significant in 5% level with a negative coefficient. It means that there is a significant relationship between CPI variable and rate variable, while the negative coefficient describe the negative relationship between CPI variable and rate variable. When the lead arranger is facing a situation with a high moral hazard of the borrower, represent by the low CPI rate in a country, then the lenders will demand a higher interest rate and vice versa.

The last test in model 8 shows that the country risk variable has a significant relationship in 1% level with a positive coefficient. It shows the significant positive relationship between country risk variable and rate variable, which means if a high credit risk is represented by a high country risk of a country, then the lenders will demand a higher pricing of syndicated loans. From the robustness check test results on model 5, model 6, model 7, and model 8, we can conclude that in a situation where the lenders are facing a higher risk syndicated loan, in terms of moral hazard risk or credit risk, the lenders will demand a higher return to compensate the risk they are facing.

E. Conclusion

The test result for all loan transaction sample in Asia since 1999 until 2003, describe that the lead arranger decision making to syndicate the loan, highly related to the risk factor implied. One of the risks is the moral hazard risk, in this research represented by CPI and the country risk of Asian countries. It means that the lead arranger will prefer to syndicate the loan in a situation where the CPI rate index is high with a low country risk rate, rather than in a situation where the CPI rate index is low with a high country risk rate. This consideration is to maintain the lead arranger's reputation and to earn a higher certification effect in syndicated loans.

The same thing applies for the lead arranger decision on size determination in loans transaction in Asia during 1999-2003. The CPI is not a significant factor that could affect the lead arranger decision on syndicated loans, but if we analyze the coefficient then we could conclude that if the borrower has a high moral hazard issue showed by the CPI rate of the borrower home country, then the lead arranger will tend to form a smaller size syndicate. This result is not aligned with the country risk research, where the country risk will affect the lead arranger decision to determine the size of syndicated loans. For a higher country risk, the lead arranger will form a bigger size of syndicate. The result on country risk research is supporting the theory

of risk diversification in syndicated loans, and also raises a question about why the lenders still want to join the syndicate even though they know that a high credit risk is involved. The answer could be because the lenders' motivations to earn a higher return as a trade off for a higher risk condition.

The robustness check also confirmed the possibility that the lenders' motivations are to earn a higher return as a trade off for a higher risk condition. We can conclude that a low CPI rate with a high country risk rate will cause the lead arranger to demand a higher return fee and interest. But since the test for CPI is insignificant, with a positive coefficient, means that there is an indication that the lead arranger will ask for a higher fee when they are facing a lower CPI rate.

A. Implication

From this research, we could conclude that there is an important result that could affect the government policy in banking sector. It is proven that the lenders value the risk factor when they invest in a syndicated loan, since they will demand a higher fee for a higher risk loan, and the fee will decrease for a lower risk loan. This situation means that during economy crisis in banking sector, the government should not issue a policy to bailout certain bank that being a lender for a high risk loan.

Another important result is that the researchers could use macro economic variable to analyze micro economic condition, so that in a further research, the dimension will not only focus on micro economic variable.

B. Recommendation

For further research analysis, the researcher should assess lead arranger proportion variable in syndicated loan, with more comprehensive and updated data.

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