

ASYMMETRY INFORMATION AND CREDIT RISK EFFECT ON LOAN PRICING IN ASIA PACIFIC 2006-2010

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ABSTRACT

The purpose of this research is to test the relationship of the independent variables (commercial bank, mix bank, country risk, CPI, foreign lender, log amount, maturity, ticker, secure, senior, deal purpose, and sector industries) to the dependent variables (loan spread). Key issues in this study consisted of information asymmetry, moral hazard, adverse selection and country risk. The results of this research shows the variable that significantly affect the loan pricing decisions by lenders especially in Asia Pacific countries. Borrowers in Asia Pacific can learn from the lender's behavior in the loan pricing decision. They also can have more knowledge on the determinants influence the procedure of the loan pricing. Governments of the Asia Pacific countries can use this study to gain more information about factors that influence the loan pricing. They should make a regulation according loan pricing decisions and they should monitored the process of the loans for the local banks so they wouldn't be bankrupt because loans in Asia Pacific contains high risk.

Keywords : Asymmetry Information, Credit Risk, Loan Pricing.

INTRODUCTION

Loan pricing is a critically important topic in the study of financial institutions (Swank, 1996). There are many research about loan pricing and what is considered in the loan pricing, but this research is contributing on the behavior in Asia Pacific region while the other research is conducting the research in the developing countries such as U.S and Europe which are already well regulated. Researcher also focusing this study on the country risk effect and the other credit risk that is considered by lenders in the loan pricing.

The most substantial theories affecting variables in loan pricing decision are asymmetric information and moral hazard theories (Sinkey, 2002; Heffernan, 1996). In Indonesia, asymmetric information becomes a serious issue related to the insufficient monitoring system from creditor and the weakness of financial system regulation. This situation creates unique aspect for loan pricing research in Indonesia caused by high level of asymmetric information, which is different from the previous research conducted in USA and Europe with low level of asymmetric information.

Country characteristics has an important role in shaping the loan pricing despite the availability of financial information related to borrower. This is because the risk of asymmetry information in the Asia Pacific countries is greater than the U.S. or Europe, so the lender need to assess the risks that could affect the ability of borrower to repay the loan. Comparing risk assessment and loan pricing by domestic lenders and foreign lenders are also conducted by Atmojo (2004). Atmojo (2004) explains that domestic lenders are in a good position to easily obtain information and more cost efficient than the foreign lenders.

Atmojo (2004) also categorize corporate lending based on listed and non listed borrowers. For listed borrowers which shares traded on the stock exchange, the information will be more easily obtained. (Booth, 1992) also explained that publicly owned companies will reduce a lower asymmetric information and monitoring cost, as well caused a lower risk, since the borrower maintain their transparency which results in a lower/cheaper loan pricing.

For type of creditor, there are 2 kinds of banks which are commercial bank and investment bank. Marciano (2008) explained that commercial bank have a better ability to reduce asymmetric information compare to investment bank. Furthermore, the loan size that the lenders give to the borrower is representing the quality of the borrower to decide the spread given.

In finance, maturity or maturity date refers to the final payment date of a loan or other financial instrument, at which point the principal (and all remaining interest) is due to be paid. It represents that the riskier the company, lenders will tend to give shorter term maturity so they can reevaluate it, thus lenders will give high spread to cover high risk that the company have (Barclay and Smith, 1995; Stoch and Mauer, 1996).

Another variable that needs to be considered is whether the loan is secured with the collateral or not. The definition of collateral in Winton and Rajan (1995) is as a "specific assets pledged as security for a loan". Bester (1985), Besanko and Thakor (1987) stated that the borrower could have a good credit risk quality by offering a collateral. While for seniority, if the loan is senior it means it will be paid first than the subordinates loan. This suggests that senior loans will be charged lower loan spread by lender.

LITERATURE REVIEW

Lasmono and Marciano (2010) explained that the high rate of corruption perception index shows the common practice of bribe and misused fundings in the bureaucrat, which could lead to borrower's false action such as issuing a misleading financial report, false tax report, etc. Country with high corruption perception index indicates that the asymmetry information also greater, thus the lenders will enlarge the loan spread. **H₁ : The higher the corruption rate will results in a higher loan spread.**

Listed company is monitored by the investors, public claimholders, analysts or bond rating agencies all the time through cross monitoring. The situation where the information is easier to obtain could reduce the level of asymmetry information between lenders and borrowers (Marciano, 2008). Therefore, listed borrowers will have lower loan spread compared with non listed borrowers (Booth, 1992). **H₂ : Listed company makes lender gives lower loan spread.**

There are findings from Goldberg, Dages, and Kinney (2000) who explained that foreign banks will have better performance in lending to developing countries if the foreign bank may cooperate with the domestic banks located in that country. Atmojo (2004) explained that domestic lenders are in a good position to easily obtain information and more cost efficient than the foreign lenders. Therefore, foreign lenders will have higher loan spread than the domestic lenders. **H3 : Foreign lenders gives higher loan spread compare to domestic lenders.**

The result of the research conducted by Tanjung and Marciano (2012) shows that investment bank has poor monitoring capabilities, so they will increase the lead share to get a better monitoring ability. Drucker and Puri (2003) also explained that the investment bank has a higher monitoring costs due to weak evaluation capability compare to commercial bank. **H4 : Commercial bank gives lower loan spread compare to investment bank.**

Country risk is an an index measuring the risk of a country that is based on credit risk and political risk (Tanjung, 2012). No matter how good the company's financial performance, it will have a high risk if the country condition is unstable (Tanjung, 2012). This condition leads the lender to give higher loan spread to the country that have high country risk. **H5 : The higher the country risk will results in a higher loan spread.**

There are negative relationship between maturity and loan spread. The riskier the company, lenders will tend to give shorter term maturity so they can reevaluate it, thus lenders will give higher spread to cover high risk that the company have. Lasmono (2010) also explained that it is because a short term maturity will results in a more frequent due time payment extension request by the borrower, and cause a more frequent monitoring activities by the lenders. **H6 : Longer maturity makes lender gives lower loan spread.**

Smith and Warner (1979) shows that secured loans need more monitoring than unsecured loans or loan without collateral. The existence of collateral assumed as a signal of high risk loan (Harhoff and Korting, 1998). In conclusion, loan with collateral is considered riskier thus lender will assigned higher loan spread to the borrower. **H7 : Secured loans makes lender gives higher loan spread.**

The findings of research conducted by Tanjung and Marciano (2012) are consistent with research by Godlewski and Weill (2007) which stated that the existence of seniority would lead a lower need of lead arranger to monitor the borrower, thus the loan spread will be reduced. This suggests that senior loans will be charged lower loan spread by lender. **H8 : Senior loans makes lender gives lower loan spread.**

RESEARCH METHOD

Data collection procedure begins with collecting all transactions data from the data of all loan corporations that were recorded on Dealscan LPC (Loan Pricing Corporation). From the data, this research sort it based on these characteristics: (1) loan contracts in the period 2006 – 2010 (2) loans located in the Asia Pacific region, specifically in 17 countries, i.e. China, Japan, Australia, South Korea, Indonesia, Taiwan, Thailand, Malaysia, Hong Kong, Singapore, Philippines, Sri Lanka, Vietnam, Bangladesh, Macau, Cambodia and Laos (3) U.S. dollar denomination loans (4) loans with LIBOR base rate. After following the characteristics, the sample have total 886 loan transactions.

This research used only two levels of measurement which is nominal and ratio level measurements. The OLS regression (Ordinary Least Squares) to estimate the determinants in loan spread with white correction method (White heteroscedasticity correction).

RESULTS AND DISCUSSION

This research will be conducted in several groups of model, which are : (1) all sample loan data (2) public loan data (3) non-public loan data (4) public loan data with financial performance.

Table 1 shows the results for all four models, compare to the hypotheses explained in the theory above. The number inside parenthesis [] is showing the t-Statistic value.

Table 1 Comparison of Hypotheses and Research Results (All Models)

VARIABLE	Hypotheses	Model 1 :	Model 2 :	Model 3 :	Model 4 :
		ALL SAMPLE	PUBLIC	NON PUBLIC	PUBLIC WITH FINANCIAL PERFORMANCE
		Coefficient	Coefficient	Coefficient	Coefficient
COMM_BANK	Negative	-64.4770*** [-4.3505]	-32.2409** [-1.9545]	123.0018*** [-3.4945]	-33.6570** [-1.8934]
MIXBANK	Negative	-65.9912*** [-5.0993]	-46.7062*** [-3.2736]	143.0787*** [-4.6705]	-41.0108*** [-2.7031]
COUNTRYRISK	Positive	14.9030*** [5.7165]	17.0724*** [5.5934]	18.0313*** [2.6778]	13.0256*** [3.7166]
CPI	Positive	4.2061** [2.0731]	4.0641* [1.7896]	2.4685 [0.4612]	1.7792 [0.7084]
LEN_FRGN	Positive	-9.7603 [-1.2604]	0.5369 [0.0642]	22.7908 [1.2284]	1.6075 [0.1758]
LOGAMMOUNT	Negative	-5.6729 [-0.7376]	-13.5767* [-1.5940]	-11.0042 [-0.5969]	-1.8664 [-0.1902]
MATURITY	Negative	-0.3203*** [-3.0340]	-0.0392*** [-0.2989]	0.2780 [1.2584]	-0.1067 [-0.7373]
TICKER	Negative	-50.5638*** [-6.9045]	----- -----	----- -----	----- -----
SECURE	Positive	29.2366*** [2.9842]	46.7265*** [4.0591]	14.4531 [0.6998]	43.1417*** [3.1728]
SENIOR	Negative	-114.3224*** [-3.2153]	-5.0083 [-0.1358]	413.1475*** [-3.4163]	-19.3969 [-0.4704]
DEALPURPOSE	Positive	10.6082 [1.3331]	7.5459 [0.8642]	-3.0431 [-0.1545]	5.7495 [0.6003]
DEBTTOASSETS	Positive	----- -----	----- -----	----- -----	0.5031 [0.0913]
LOGINCOME	Negative	----- -----	----- -----	----- -----	-18.7793*** [-3.8272]
ROA	Negative	----- -----	----- -----	----- -----	-30.2482 [-0.7988]

The test results showed negative and significant coefficient at 1% between loan spread with commercial bank. This shows that commercial bank lender have the tendency to give lower loan spread to the borrower. This happened because commercial bank have a better ability to reduce asymmetric information compare to investment bank that will lead to a cheaper loan pricing decision (Marciano, 2008). This research results is in accordance with the research results conducted by Tanjung and Marciano (2012) that conclude significant negative relationships between loan spread and commercial bank.

Mix bank variable showed negative and significant coefficient at 1%. The results of this analysis is in accordance with the statement of Drucker and Puri (2003) which revealed that the investment bank has a higher monitoring costs due to weak evaluation capability compare to commercial bank. While Gupta, Singh, and Zebedee (2008) adds that universal banks are more flexible than an investment bank because the bank function are between investment banks and universal banks.

Countryrisk variable showed positive and significant coefficient at 1%. This suggests that the riskier the country, the higher the loan spread. In their book, Jorion (2002), Heffernan (2008), Eaton et al., (1894) stated that 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 findings is in accordance with the findings of Lasmono and Marciano (2010) who found that higher risk of loan will cause lender to require greater monitoring capabilities.

CPI variable showed positive and significant coefficient at 5%. This suggests that the higher the corruption index will lead the lender to assign higher spread. Because the lenders will try to protect themselves by increasing its monitoring capabilities. This finding is similar with the research done by Lasmono and Marciano (2010) which explained that when the level of corruption of a country is very high, then the asymmetry information also predicted to be greater, thus the lenders will enlarge its share.

Maturity variable showed negative and significant coefficient at 1%. This shows that the longer the maturity given, lender will assign lower spread because a long term maturity indicates that the lender didn't need to reevaluate or remonitoring oftenly. Shorter term maturity rate will give a chance for creditor to reevaluate or remonitoring when the loan is due, which mean there is positive coefficient between maturity rate with debtor's quality (Barclay and Smith, 1995; Stoch and Mauer, 1996). If the debtor's quality is good, it means that the risk of the company could not paid the loan is lower. Thus, the lender will give lower loan spread to a long term maturity date.

Ticker variable showed negative and significant coefficient at 1%. The finding is consistent with the results of Denis and Mulleneaux (2000) which revealed that if the borrower is registered in the capital markets, it may reduce the lender's monitoring cost. It is also supported by the findings of Booth (1992) which explained that listed borrowers will have lower loan spread because there are cross monitoring that conducted by the public claimholders, analyst and bond rating agencies. Information is easier to obtain in listed company than private or non listed company, the situation where the information is easier to obtain could reduce the level of asymmetry information between lenders and borrowers.

Secure variable showed positive and significant coefficient at 1%. This suggests that if there is a guarantee / collateral in the loan, the loan spread will be higher. The findings are consistent with the results from Tanjung and Marciano (2012). Berger, Udell (1990) also associated collateral with a riskier loans, since collateral usually are found in a loan transaction that need more monitoring. The existence of collateral assumed as a signal of high risk loan (Harhoff and Korting, 1998). Smith and Warner (1979) shows that secured loans need more monitoring than unsecured loans or loan without collateral. In conclusion, loan with collateral is considered riskier thus lender will assign higher loan spread to the borrower.

Senior variable showed negative and significant coefficient at 1%. This suggests that if the loan is senior, the lender will assign lower spread because the existence of seniority would lead a lower need of lenders to monitor the borrower (Godlewski and Weill, 2007). The findings are consistent with research by Tanjung and Marciano (2012) which showed a negative and significant coefficient for seniority variable.

The test results for model 2 showed negative and significant coefficient at 5% between loan spread with commercial bank . This shows that commercial bank lender have the tendency to give lower loan spread to the borrower. This happened because commercial bank have a better ability to reduce asymmetric information compare to investment bank that will lead to a cheaper loan pricing decision (Marciano, 2008). This research results is in accordance with the research results conducted by Tanjung and Marciano (2012) that conclude significant negative relationships between loan spread and commercial bank.

Mix bank variable showed negative and significant coefficient at 1%. The results of this analysis is in accordance with the statement of Drucker and Puri (2003) which revealed that the investment bank has a higher monitoring costs due to weak evaluation capability compare to commercial bank. While Gupta, Singh, and Zebedee (2008) adds that universal banks are more flexible than an investment bank because the bank function are between investment banks and universal banks.

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CPI variable showed positive and significant coefficient at 10%. This suggests that the higher the corruption index will lead the lender to assign higher spread. Because the lenders will try to protect themselves by increasing its monitoring capabilities. This finding is similar with the research done by Lasmono and Marciano (2010) which explained that when the level of corruption of a country is very high, then the asymmetry information also predicted to be greater, thus the lenders will enlarge its share.

Secure variable showed positive and significant coefficient at 1%. This suggests that if there is a guarantee / collateral in the loan, the loan spread will increase. Berger, Udell (1990) also associated collateral with a riskier loans, since collateral usually are found

in a loan transaction that need more monitoring. The existence of collateral assumed as a signal of high risk loan (Harhoff and Korting, 1998). Smith and Warner (1979) shows that secured loans need more monitoring than unsecured loans or loan without collateral. In conclusion, loan with collateral is considered riskier thus lender will assign higher loan spread to the borrower.

The test results for model 3 showed negative and significant coefficient at 1% between loan spread with commercial bank . This shows that commercial bank lender have the tendency to give lower loan spread to the borrower. This happened because commercial bank have a better ability to reduce asymmetric information compare to investment bank that will lead to a cheaper loan pricing decision (Marciano, 2008). This research results is in accordance with the research results conducted by Tanjung and Marciano (2012) that conclude significant negative relationships between loan spread and commercial bank.

Mix bank variable showed negative and significant coefficient at 1%. This suggests that the lender with mixed functions (commercial and investment banks) would have a better monitoring capability compared to omitted variable (investment bank) so the spread will be decline and credit risk exposure of the overall lenders will be reduced as well (Tanjung and Marciano, 2012). The results of this analysis is in accordance with the statement of Drucker and Puri (2003) which revealed that the investment bank has a higher monitoring costs due to weak evaluation capability compare to commercial bank. While Gupta, Singh, and Zebedee (2008) adds that universal banks are more flexible than an investment bank because the bank function are between investment banks and universal banks.

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Senior variable showed negative and significant coefficient at 1%. This suggests that if the loan is senior, the lender will assign lower spread because the existence of seniority would lead a lower need of lenders to monitor the borrower (Godlewski and Weill, 2007). The findings are consistent with research by Tanjung and Marciano (2012) which showed a negative and significant coefficient for seniority variable.

The test for model 4 results showed negative and significant coefficient at 5% between loan spread with commercial bank. This happened because commercial bank have a better ability to reduce asymmetric information compare to investment bank that will lead to a cheaper loan pricing decision (Marciano, 2008). This research results is in accordance with the research results conducted by Tanjung and Marciano (2012) that conclude significant negative relationships between loan spread and commercial bank.

Mix bank variable showed negative and significant coefficient at 1%. The results of this analysis is in accordance with the statement of Drucker and Puri (2003) which revealed that the investment bank has a higher monitoring costs due to weak evaluation capability compare to commercial bank. While Gupta, Singh, and Zebedee (2008) adds

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Secure variable showed positive and significant coefficient at 1%. This suggests that if there is a guarantee / collateral in the loan, the loan spread will increase. Berger, Udell (1990) also associated collateral with a riskier loans, since collateral usually are found in a loan transaction that need more monitoring. The existence of collateral assumed as a signal of high risk loan (Harhoff and Korting, 1998). Smith and Warner (1979) shows that secured loans need more monitoring than unsecured loans or loan without collateral. In conclusion, loan with collateral is considered riskier thus lender will assign higher loan spread to the borrower.

Senior variable showed negative but not significant coefficient. This suggests that whether the borrower's company is senior or not, it would not affect the amount of spread given to the borrower. The negative coefficient shows that if the loan is senior, the lender will assign lower spread because the existence of seniority would lead a lower need of lenders to monitor the borrower (Godlewski and Weill, 2007). Besides that, the results is not significant because the data is grouped in different specification, so for public with financial performance testing tend to have a more dominant data on dummy 1 (senior loans).

Log income variable showed negative and significant coefficient at 1%. This suggests that the higher the income of a company will lead to a lower spread. This happened because high income indicates that the company have a good financial performance. This findings is similar with the results of Tanjung and Marciano (2012) which explains that the better the financial performance of the company will push the lenders to lose its lead share, because good financial performance lead to a lower default risk, so lenders may reduce the monitoring cost too.

CONCLUSION AND RECOMMENDATION

The purpose of this research is to know the relationship of the independent variables (commercial bank, mix bank, country risk, CPI, foreign lender, log amount, maturity, ticker, secure, senior, deal purpose, and sector industries) to the dependent variables (loan spread).Based on the test with four models, it is concluded that some significant factors are the type of creditor, the country risk, the corruption perception index, maturity, the borrower's companies whether they are listed or not, seniority and whether their loan is secured or not.

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