SOCIAL RESPONSIBILITY AS COMPETITIVE ADVANTAGE IN GREEN BUSINESS

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SOCIAL RESPONSIBILITIES AS A COMPETITIVE ADVANTAGE IN GREEN BUSINESS

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DETERMINANTS OF CORPORATE DEBT MATURITY IN ASIA PACIFIC

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Abstract

This study is aimed to analyze factors that determine debt maturity. Since the asymmetric information level in Asia Pacific is higher compare to U.S. and Europe, the debt maturity decision become riskier. This study is using 13 different regression model, all sample, listed and crisis, listed and non crisis, non listed and crisis, non listed and non crisis, listed with performance and crisis, listed with performance and non crisis, listed high leverage, listed high leverage and crisis, listed high leverage and non crisis, listed low leverage, listed low leverage and crisis, listed low leverage and non crisis. This paper investigates the determinants of debt maturity for all loan sample in Asia Pacific during 2006-2010, using ordinary least square method to support the results. Based on the research, lenders are proven inable to differentiate between good quality borrowers and bad quality borrowers. Thus, in terms of debt maturity policy, the risk is higher for lenders compare to borrowers.

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Abstract – This study is aimed to analyze factors that determine debt maturity. Since the asymmetric information level in Asia Pacific is higher compare to U.S. and Europe, the debt maturity decision become riskier. This study is using 13 different regression model, all sample, listed and crisis, listed and non crisis, non listed and crisis, non listed and non crisis, listed with performance and crisis, listed with performance and non crisis, listed high leverage, listed high leverage and crisis, listed high leverage and non crisis, listed low leverage, listed low leverage and crisis, listed low leverage and non crisis. This paper investigates the determinants of debt maturity for all loan sample in Asia Pacific during 2006-2010, using ordinary least square method to support the results. Based on the research, lenders are proven inable to differentiate between good quality borrowers and bad quality borrowers. Thus, in terms of debt maturity policy, the risk is higher for lenders compare to borrowers.
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INTRODUCTION

Debt maturity is an important aspect of loan transaction, since it is affecting the firm's value (Megginson, 1997). Smart, et al. (2004) explained that the amount of paid interest become higher for a longer debt maturity period, which will increase cost of debt and cost of capital thus affecting the firm's value.

Research regarding debt maturity in U.S. and Europe has been commonly conducted, i.e.: asymmetric information and moral hazard (Custodio Claudia, liquidity risk (Diamond, 1991), risk and asymmetric information (Berger, et al., 2004), maturity structure (Barclay, et al., 1995), refinancing risk and cash holdings (Harford, et al., 2011), leverage and firm investment (Dang, 2011), maturity structure and credit quality (Gopalan, et al., 2010), capital structure (2011), and growth opportunities, choice of leverage, and covenant (Billett, et al., 2007). But for Asia region, in particular Asia Pacific, debt maturity research is uncommon. That become the purpose of this study to test factors that determine debt maturity in Asia Pacific. It become more important and unique to conduct this research, since the previous study done in U.S. and Europe has a low asymmetric factor compare to Asia Pacific with a high asymmetric information level. This statement also supported by Tanjung (2012) that stated "Asia Pacific is a high risk region, with a lower transparancy compare to U.S. and Europe. Moral

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hazard is easier to be found in developing countries in Asia with a high asymmetric information level".

A few examples of debt maturity study can be found as below: Research done by Custodio, et al. (2011) on corporate debt maturity in U.S. industries from 1976 until 2008, exclude financial corporates (SIC Code 6000-6999) and utility corporates (SIC Code 4900-4999), shown that size, abnormal earnings, asset maturity, and leverage variables, have a positive and significant effect on debt maturity. While other variables such as market to book, volatility, R&D, and term spread indicate a significantly negative effect on debt maturity, except for term spread variable that turns out to be insignificant.

Wang, et al. (2010) study debt maturity structure based on macro economy variable in all listed firms in China from 1999 until 2005, not including financial corporates and other eliminated firms that don't match the criteria. The conclusion from the research indicate that variables like size, asset maturity, ROE, and macro tax burden, have a significantly positive effect on debt maturity, except for ROE that shown insignificant effect. Other variables like GDP, inflation, and money supply have a negative and significant effect on debt maturity. Independent variables used in this study are: LEVERAGE variable, SIZE variable, PROFITABILITY variable, and COUNTRY RISK variable.

THEORETICAL FRAMEWORK

Theories used in this study are asymmetric information and pecking order theory, where asymmetric information not only caused adverse selection and moral hazard, but also agency problem.

Leverage effect on Debt Maturity

Barclay and Smith (1995), Stohs and Mauer (1996) stated that monthly measured debt maturity will increase in the same time with the increasing leverage measured by debt ratio. Antoniou, Guney and Paudyal (2006) also conclude that leverage has a positive effect on debt maturity. Firm with high leverage tend to have a high default risk, thus have a long debt maturity. While smaller firm have a low leverage with low default risk which results on short debt maturity.

Barclay et al. (2003) recommend firm with high liquidity risk and high leverage to avoid short term debt, thus leverage and debt maturity can be use as a strategy to solve lack of investment issue.

H1: Leverage is assumed to have a positive effect on debt maturity.

Size effect on Debt Maturity

Study by Yanhui Wang, et al. (2010) indicates that size measured by logarithm of total assets, has a positive effect on debt maturity. Big firm tend to have a low credit risk causing lenders to give long debt maturity. In the contracry, for a small firm with a high credit risk, lenders will give short term maturity. Custodio, et al. (2011) also agreed that size has a positive effect on debt maturity. Small firm also most likely have a high asymmetric information which increase the risk and causing lenders to give short debt maturity.

H2: Firm's size is assumed to have a positive effect on debt maturity.

Profitability effect on Debt Maturity

Myers and Majluf (1984) stated that there is a negative relationship between profitability that is measured by ROA, with debt maturity. The reason behind it is because a more profitable firm tend have a smaller amount of loan which causing them to prefer a short maturity. According to pecking order theory, firm with high profitability most likely to prefer capital structure using retained earning to lower debt amount, and continuously borrow small amount of debt with a short maturity. Baum, et al. (2007) study shown that when firm's profitability increase, they will borrow small amount of debt with short maturity.
H3: Profitability is assumed to have a negative effect on debt maturity.

Country Risk effect on Debt Maturity

According to Marciano (2012), high level of country risk that is measured from scale 0 to 5 (ordinal), will results in a high level of firm's risk and default risk, caused bank to request repayment at earliest time, which means the debt maturity will become shorter. This goes along with Joshua Abor, et al. (2009) study that indicates default risk to have a negative effect on debt maturity.
H4: Country risk is assumed to have a negative effect on debt maturity.

This study also used control variables such as : listed, secured, amount, senior, syndicated, debt repayment, working capital and takeover.

RESEARCH METHOD

Data Collection

Data used for this study are collected from dealscan database, compiling corporates in Asia Pacific that act as a borrower from 2006 until 2010. In total, there are 1, 058 loan divided into 12 sub samples, where 6 sub samples are ranked based on their level of uncertainty and level of asymmetric information, as shown in the picture below:

Picture 1 & 2

Sub Sample based on level of uncertainty and level of asymmetric information (left) and Sub Sample based on level of uncertainty and level of financial risk (right)

(Source: compiled from different sources (attached))

While the other 6 sub sample are categorized based on level of uncertainty and level of financial risk as shown in picture 3 below. But, 2 sub sample from the total 6 in that category, are divided based on the average of their leverage. While the other 4 sub sample are divided based on crisis and non-crisis.

Data Analysis

The first step is to decide which regression model will be used for this study. There are 13 regression model to test the hypothesis:

(1) All sample

$DEBT\ MATURITY = \alpha_0 + \alpha_1 LISTED + \alpha_2 Log(AMOUNT) + \alpha_3 SENIOR + \alpha_4 SECURED + \alpha_5 SYNDICATE + \alpha_6 DEBT\ REPAYMENT + \alpha_7 TAKEOVER + \alpha_8 WORKING\ CAPITAL + \alpha_9 COUNTRY\ RISK + \delta$

(2) Loan history for listed and crisis

$DEBT\ MATURITY = \beta_0 + \beta_1 Log(AMOUNT) + \beta_2 SECURED + \beta_3 SYNDICATE + \beta_4 DEBT\ REPAYMENT + \alpha_5 WORKING\ CAPITAL + \beta_6 COUNTRY\ RISK + \varepsilon$

(3) Loan history for listed and non crisis

$DEBT\ MATURITY = \chi_0 + \chi_1 Log(AMOUNT) + \chi_2 SENIOR + \chi_3 SECURED + \chi_4 SYNDICATE + \chi_5 DEBT\ REPAYMENT + \chi_6 TAKEOVER + \chi_7 WORKING\ CAPITAL + \chi_8 COUNTRY\ RISK + \varpi$

(4) Loan history for non-listed and crisis

$DEBT\ MATURITY = \gamma_0 + \gamma_1 Log(AMOUNT) + \gamma_2 SENIOR + \gamma_3 SECURED + \gamma_4 SYNDICATE + \gamma_5 DEBT\ REPAYMENT + \gamma_6 WORKING\ CAPITAL + \gamma_7 COUNTRY\ RISK + \omega$

(5) Loan history for non-listed and non-crisis

$DEBT\ MATURITY = \eta_0 + \eta_1 Log(AMOUNT) + \eta_2 SENIOR + \eta_3 SECURED + \eta_4 SYNDICATE + \eta_5 DEBT\ REPAYMENT + \eta_6 TAKEOVER + \eta_7 WORKING\ CAPITAL + \eta_8 COUNTRY\ RISK + \xi$

(6) Loan history for listed with performance and crisis

$DEBT\ MATURITY = \lambda_0 + \lambda_1 Log(AMOUNT) + \lambda_2 SECURED + \lambda_3 SYNDICATE + \lambda_4 DEBT\ REPAYMENT + \lambda_5 TAKEOVER + \lambda_6 WORKING\ CAPITAL + \lambda_7 COUNTRY\ RISK + \lambda_8 LEVERAGE + \lambda_9 SIZE + + \lambda_{10} \mathrm{ROA} + \psi$

(7) Loan history for listed with performance and non-crisis

$DEBT\ MATURITY = \mu_0 + \mu_1 Log(AMOUNT) + \mu_2 SENIOR + \mu_3 SECURED + \mu_4 SYNDICATE + \mu_5 DEBT\ REPAYMENT + \mu_6 TAKEOVER + \mu_7 WORKING\ CAPITAL + \mu_8 COUNTRY\ RISK + \mu_9 LEVERAGE + \mu_{10} SIZE + \mu_{11} \mathrm{ROA} + \zeta$

(8) Loan history listed high leverage

$DEBT\ MATURITY = \nu_0 + \nu_1 Log(AMOUNT) + \nu_2 SENIOR + \nu_3 SECURED + \nu_4 SYNDICATE + \nu_5 DEBT\ REPAYMENT + \nu_6 TAKEOVER + \nu_7 WORKING\ CAPITAL + \nu_8 COUNTRY\ RISK + \nu_9 LEVERAGE + \nu_{10} SIZE + \nu_{11} \mathrm{ROA} +$ э

(9) Loan history for listed high leverage and crisis

$DEBT\ MATURITY = \pi_0 + \pi_1 Log(AMOUNT) + \pi_2 SECURED + \pi_3 SYNDICATE + \pi_4 DEBT\ REPAYMENT + \pi_5 TAKEOVER + \pi_6 COUNTRY\ RISK + \pi_7 LEVERAGE + \pi_8 SIZE + \pi_9 \mathrm{ROA} + \partial$

(10) Loan history for listed high leverage and non-crisis

$DEBT\ MATURITY = \theta_0 + \theta_1 Log(AMOUNT) + \theta_2 SENIOR + \theta_3 SECURED + \theta_4 SYNDICATE + \theta_5 DEBT\ REPAYMENT + \theta_6 TAKEOVER + \theta_7 WORKING\ CAPITAL + \theta_8 COUNTRY\ RISK + \theta_9 LEVERAGE + \theta_{10} SIZE + \theta_{11} \mathrm{ROA} + \vartheta$

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(11) Loan history for listed low leverage
$DEBT\ MATURITY = \rho_0 + \rho_1 Log(AMOUNT) + \rho_2 SECURED + \rho_3 SYNDICATE + \rho_4 DEBT\ REPAYMENT + \rho_5 TAKEOVER + \rho_6 WORKING\ CAPITAL + \rho_7 COUNTRY\ RISK + \rho_8 LEVERAGE + \rho_9 SIZE + \rho_{10} \mathrm{ROA} + \exists$

(12) Loan history for listed low leverage and crisis
$DEBT\ MATURITY = \sigma_0 + \sigma_1 Log(AMOUNT) + \sigma_2 SECURED + \sigma_3 SYNDICATE + \sigma_5 DEBT\ REPAYMENT + \sigma_5 TAKEOVER + \sigma_6 WORKING\ CAPITAL + \sigma_7 COUNTRY\ RISK + \sigma_8 EVERAGE + \sigma_9 SIZE + \sigma_{10} \mathrm{ROA} + \varphi$

(13) Loan history for listed low leverage and non-crisis.
$DEBT\ MATURITY = \tau_0 + \tau_1 Log(AMOUNT) + \tau_2 SECURED + \tau_3 SYNDICATE + \tau_4 DEBT\ REPAYMENT + \tau_5 TAKEOVER + \tau_6 COUNTRY\ RISK + \tau_7 LEVERAGE + \tau_8 SIZE + \tau_9 \mathrm{ROA} + \phi$

RESULTS

In this part of study, the results from 13 models testing will be explain and supported with table. The software used in this process is eviews with Least Squares method to find factors that determine debt maturity.

The test results for model 1 indicate that listed variable has a significantly negative effect on debt maturity. The reason behind this is because listed firm has a better ability to pay their loan, thus causing them to take long term debt. As a results, lenders will be more likely to give short debt maturity to borrowers. Log (Amount) variable has a positive and significant effect on model number 2, 3, 4, 6, 7, 8, 10, 12, and 13. This happen because public or listed firm are normally also big size firm, so their debt maturity is not affected by the change in the amount of loan. The test results indicate that Log (Amount) variable has a positive and significant effect on debt maturity on model 1, 5, 9, and 11. It means that in general, borrowers that borrow big amount of loan are tend to choose long term debt to avoid short term payment.

Senior variable on model 1, 3, 4, 7, 8 and 10 show significantly negative effect on maturity. The reason is because lenders want to have faster monitoring on the loan. Diamond (1993) also stated that maturity for junior debt are longer than senior debt. Senior variable show positive and significant effect on maturity towards model 5, because from the firm’s point of view, loan with longer debt maturity will be chosen if the asymmetric information level is higher.

Secured variable has insignificantly positive effect on model 2, 4, 6, 10, 11, 12, and 13. Since the loan has a collateral, then the default risk is also higher, thus the firms will prefer long term debt. While lender will assume that the firm has a better ability to paid the loan since the firms has a collateral (Marciano,2008). Since lender doesn’t have enough information about the firm situation, their response can be aggresive that causing the insignificant test results. For secured variable, the test results indicate that debt maturity has a positive and significant effect on model 1, 3, 7, 8, 9. This means that the firm can provide collateral to lenders, and the firm will request a longer debt maturity to lenders.

The test results for secured variable show negative and insignificant effect on model 5. Based on the firm’s perspective, since the loan are given with collateral, means the company can pay off their debt in short time, thus causing them to request for a short debt maturity. But in the contrary, lenders will assumed that the firm has a high default risk because they provide collateral in case they

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can not repay their debt (Marciano, 2008). Incomplete information about the firm situation make the lenders tend to have aggresive response thus causing the insignificant test results.

Syndicated variable has a significantly positive effect on model 1, 2, 3, 4, 6, 10, and 12, because syndicated firm send signal to lenders about their company safety, which causing lenders to give a long term debt. But aside to that, lenders also has a responsibility to conduct routine monitoring since syndicated loan means that the firm borrow big amount of loan and lender is incapable to provide so they need another lenders to assist them. The conflict of interest will make lenders to have aggresive response causing the results to be insignificant.

Syndicated variable has a significantly negative effect on model 5, 7, 8, 9, 11, and 13. One of the reasons is explained by Dennis and Mullineaux (1999), saying that if there is a significant potency from lead arranger to conduct moral hazard in syndicated loan, then a shorter debt maturity can minimize the problem. A shorter maturity means there will be more often request from debitor to extend the maturity deadline, thus make participant lenders to conduct more often monitoring activity (Lasmono, 2010). The conflict of interest will make lenders to have aggresive response causing the results to be insignificant.

Debt repayment variable indicate insignificantly negative effect on model 2, 6, 9, 12, because firm with debt refinancing as their motivation, will have a higher risk compare to other type of motivation, causing the borrowers to get a shorter debt maturity from the lenders. The insignificant result is caused by lenders' response seeing the borrowers has a different motive because they are too interested in a loan for the purpose of debt consolidation.

Debt repayment variable as a motive indicate negative and significant effect on maturity variable towards model 1, 3, 4, 5, 7, 8, 10, 11, and 13. It show that borrowers that has debt repayment as their motive will request a short debt maturity. While on lender's perspective, lenders will choose short term maturity considering the high risk and the high need of monitoring.

Take over variable show positive insignificant results on model 3, 6, and 9, because in general loan for take over purpose is riskier compare to other type of purpose, thus the borrowers will prefer to have along debt maturity. It is also supported by Booth and Booth (2002) study that stated different of interest, will create aggresive response from lenders, thus the results become insignificant.

Take over variable indicate insignificantly negative results on model 1, 5, and 12. Evelyn (2006) explained that loan for take over purpose usually contain high risk, means that the borrowers will get short maturity from lenders. But because take over involving take over process for all shares by one or several persons, then the ownership of the firm is automatically change from public become non public., because the lenders will have aggresive response caused by the ownership change, which means the results will be insignificant.

Take over variable show negatife and significant effect on model 7, 8, 10, 11, and 13. The reason for this is because loan for take over purpose is riskier compare to other type of purpose, thus the borrowers will get short maturity from lenders.

Working capital variable indicate insignificant positive effect on model 2. Purnomo (2012) stated that high working capital indicate lower risk thus the firm should be able to get long term maturity. While Evelyn (2006) explained that the borrowers will prefer to have a short term maturity because working capital is fund by short term financing, means that the borrowers will get a short term maturity. The lenders will have aggresive response caused by the different of interest, which means the results will be insignificant. Working capital variable as a purpose of loan indicate negative and significant effect on maturity variable towards model 1, 3, 4, 5, 11, and 12, because the nature of working capital is short term financing, thus the borrowers will borrow with short term maturity and lenders will granted their request.

Working capital variable as a purpose of loan indicate positive and significant effect on maturity variable towards model 7, 8, 10. The reason for borrowers action is to invest money obtained from short term financing, and in the end it can be use to repay the loan and generate long term revenue. It also align with the concept of loan for borrowers, which stated that repayment will be done in the future if long term maturity become an option.

Working capital variable show insignificantly negative effect on model 6. Evelyn (2006) tried to explain the reason by outlining the reason borrowers prefer short term maturity is laid on the nature of working capital that is fund by short term financing, thus the borrowers will get short term maturity. While for Purnomo (2012) stated that high working capital means the firm's risk is low, thus the firm should get loan with long maturity. Sedangkan menurut Purnomo (2012) dikatakan jika *working capital* tinggi maka risiko perusahaan akan kecil dan seharusnya perusahaan memperoleh pinjaman dengan maturitas yang panjang. The lenders will have aggresive response caused by the different of interest, which means the results will be insignificant.

Country risk variable indicate positive and insignificant effect on model 2, 8, and 12. This results is caused by a high level of country risk that makes the firm to choose loan with long debt maturity, and the creditor will granted the request because they also need income. By giving a long term maturity, means the creditor is ignoring the country risk level in that particular country. While for model 1, 3, 5, 7, 10, 11, and 13, the results is insignificantly negative, means that in a high country risk case, the company will get loan with short term maturity because the firm need fund to survive from bankrupcy. By taking short term maturity, the firm is ignoring the country risk level, which can cause bankrupcy. Means that the result of this study and Abor et al. (2009) study is insignificant. Country risk variable show positive and significant effect on maturity towards model 4, 6, and 9. The reason is because high level of country risk will motivate the borrowers to choose long term maturity, thus every borrowers will request for a loan as an investment to avoid default risk.

ROA, leverage and size variables are insignificant on model 6, 8, 10, 11, 12, and 13. While for model 7, the insignificant results is related to leverage and ROA, and only leverage that has insignificant results on model 9. Atmojo (2004) that the test for listed borrowers sub sample by adding common financial variables, indicate that financial ration is irrelevant to measure the risk level of loan. The reason is because from listed borrowers sub sample with financial ratio, we can see that lenders don't give enough attention on listed borrowers' financial performance, and most likely failed to differentiate between low risk listed borrowers and high risk listed borrowers.

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Size variable show negative and significant results on model 7 and 9, becayse borrowers from big size firm tend to have big asset means they can generate high sales. It means that the firm have a capability to achieve high profit thus able to repay the loan sooner compare to borrowers from small size firm.

ROA variable has a negative and significant effect on maturity towards model 9. It is align with pecking order theory, which stated that high profit firm tend to choose fund from retained earning to minimize the debt. As a result, the firm will request for a smaller amount of loan with short term maturity. It means that hypothesis number 4 that assumed profitability has a negative effect is proven.

Tabel 1
Equation for Linier Regression Model 1-13

Variable	All Sample	listed and crisis	listed and non crisis	non listed and crisis	non listed and non crisis	listed high leverage	listed high leverage and crisis	listed high leverage and non crisis	listed with performance and crisis	listed with performance and non crisis	listed low leverage	listed low leverage and crisis	listed low leverage and non crisis
C	41.16403* 1.863964	-19.99506 - 0.645068	75.20551** 2.282894	69.78926 1.239911	-51.63552 -1.319969	69.23991* 1.841181	-137.3797** -2.080335	59.52144 1.385737	-12.80238 -0.393496	68.96968** 2.136071	-13.77483 -0.415452	-25.55051 -0.683477	13.26331 0.309428
LISTED	-6.377907** -2.581587	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
LOGAMOUNT	7.631504*** 3.248	6.647716* 1.743816	3.879488 1.078319	4.007373 0.612138	12.60086** 2.240244	6.094522 1.462043	33.77852*** 4.808068	7.380929 1.516084	8.486262* 1.904136	5.90325 1.607451	8.928513** 2.251706	7.690897 1.606986	7.097191 1.380729
SENIOR	-37.2935*** -3.626943	- -	-46.35195*** -3.392203	-53.1968*** -11.513	25.67589** 2.567679	-60.3365*** -5.211444	- -	-58.82833*** -5.016988	- -	-44.47058*** -4.080943	- -	- -	- -
SECURE	8.02411** 2.424175	14.11427* 1.7101	18.73209*** 3.808938	7.014002 0.803845	-5.751328 -1.159041	31.63289*** 2.626613	33.98130*** 6.01167	26.97071* 1.759949	12.14846 1.476773	22.30546*** 2.768854	12.32444* 1.714833	5.375449 0.599972	18.06714* 1.966798
SYNDICATED	0.188901 0.060902	4.399969 0.798583	3.059542 0.794062	0.657388 0.082624	-3.170898 -0.417811	-0.478612 -0.092947	-11.16594 -1.13357	1.574537 0.264382	6.783776 1.283597	-2.171266 -0.499743	-0.795008 -0.158896	11.94787* 1.948136	-7.029866 -1.193331
DEBTREPAY	-19.59478*** -8.546281	-4.011601 - 1.012037	-23.8921*** -6.097608	-21.54379*** -2.704808	-14.69826*** -2.782847	-18.2526*** -4.456181	-10.22792 -1.650041	-20.62924*** -4.536494	-5.199202 -1.30255	-21.77549*** -6.955657	-19.66624*** -6.314035	-6.054055 -1.242976	-23.12192*** -6.102835
TAKEOVER	-1.748013 -0.082217	- -	22.2573 0.891434	- -	-25.40189 -1.063018	-11.93107** -2.390469	12.45193 1.333529	-16.31449*** -2.805855	1.391626 0.30656	-16.92344*** -4.4979	-15.01110*** -3.895315	-3.535949 -0.564039	-19.38116*** -4.000953
WORKCAP	-20.48625** -8.582186	0.512846 0.096112	-20.99467*** -4.593665	-22.95661*** -2.980206	-25.25284*** -5.217287	78.76841*** 5.021186	- -	80.34249*** 4.284971	-3.309338 -0.554565	76.82935*** 7.839381	-29.24811*** -8.353018	-15.05337** -2.230174	- -
COUNTRYRISK	-0.199732 -0.244341	2.507641* 1.964327	-0.949745 -0.849378	4.257934** 2.006939	-1.158891 -0.790616	0.66489 0.462516	7.018148** 2.570315	-0.436031 -0.257595	3.376923*** 2.930127	-0.635831 -0.531637	-1.203456 -0.915612	2.139152 1.440073	-1.398715 -0.91126
Leverage	- -	- -	- -	- -	- -	-1.340247 -0.236034	-21.20936 -0.54531	-4.425939 -0.712626	-13.45278 -1.24272	-0.672548 -0.326626	7.845466 0.669253	-3.261693 -0.20057	13.51786 0.864807
Size	- -	- -	- -	- -	- -	-3.470101 -1.612996	-20.06155*** -3.727862	-2.818106 -1.247218	-4.667083 -1.345184	-2.602276** -1.989332	1.03018 0.76769	-0.088939 -0.023316	-0.142535 -0.095583
ROA	- -	- -	- -	- -	- -	52.67034 0.692376	-430.9843*** -4.980222	93.66144 1.126504	-25.39893 -0.675973	14.63788 0.677073	-6.047484 -0.783486	-20.80123 -0.713881	-11.98093* -1.868461
Adjusted R-squared	0.0919	0.048177	0.139724	0.102747	0.059279	0.282846	0.598623	0.289721	0.128105	0.161354	0.091364	0.017158	0.115493
F-statistic	12.88535***	2.092007**	10.74508***	2.864921***	3.418186***	8.708751***	8.788543***	7.192627***	3.115744***	8.031298***	4.328233***	1.16759	4.394915***

Note: *significant 10%, **significant 5%, dan ***significant 1%

SUMMARY AND CONCLUDING REMARKS

Based on F hypothesis test, log amount, listed, secured, senior, syndicate, country risk, debt repayment, working capital, takeover, leverage, size, and profitability, have a significant impact towards debt maturity.

But under listed low leverage and crisis condition, independent and control variable, both have effect on dependent variable (maturity). It means that debt maturity can be predict using 12 exisiting models, except for listed low leverage and crisis condition.

Hypothesis testing results with t-test for all sample, listed, senior, debt repayment, and working capital variables, has a siginificantly negative effect on debt maturity. But for log amount and secure variables, the results indicate positive and significant effect on debt maturity. While for syndicated variable, the results indicate insignificantly positive effect, and for takeover and country risk variables show negative and insignificant effect. And for listed and crisis variables, there is none variable that has significantly negative effect on debt maturity. But for log amount, secure, and country risk variable, there is a positive and significant effect on debt maturity. While for syndicated and working capital variables, both indicate positive and insignificant effect, and debt repayment variable indicate negatif and insignificant effect. For listed and non crisis, senior, debt repayment, and working capital variables, all show insignificant negative effect on debt maturity. But secure variable has positive and significant effect on debt maturity. While for log amount, syndicated, and takeover variables, the results indicate insignificantly positive effect, and country risk variable indicate insignificantly negative effect.

Hypothesis testing with t-test for non listed and crisis, senior, debt repayment, and working capital variables, indicate a significantly negative effect on debt maturity. But for country risk variable, the result show that there is positive and significant effect on debt maturity. Meanwhile for log amount, secure, and syndicated variables indicate insignificantly positive effect. And for non listed and non crisis, debt repayment, working capital variables, all have negative and significant effect on debt maturity. But for log amount and senior variables, the results show positive and significant effect on debt maturity. Then for secure, syndicated, takeover, and country risk variables indicate that there are significantly negative relationship. While for performance and crisis, log amount and country risk variables, all have positive and significantly positive on debt maturity. While for secure, syndicated, and takeover variables, the results indicate insignificantly positive effect on debt maturity, and also for debt repayment, working capital, leverage, size, and profitability (ROA) variables, indicate negative and insignificant relationship. The test results for secure, syndicated, and takeover variables, indicate that there is positive and insignificant relationship with debt maturity. For debt repayment, working capital, leverage, size and profitability (ROA) variables, the test results indicate that the relationship is negative and insignificant.

Hypothesis testing using t-test for listed with performance and non crisis, senior, debt repayment, takeover, and size variables have significantly negative effect on debt maturity. But for working capital, and secure variables the results indicate positive and significant effect on debt maturity. While for log amount and profitability (ROA) variables, the effect on debt maturity is positive and insignificant, where as for syndicated, leverage and country risk variables, the results in negative and insignificant. For listed high leverage, senior, debt repayment, and takeover variables, all have negative and significant effect on debt maturity. But for working capital and secure variables, the results show positive and significant effect on debt maturity. While for log amount, profitability and country risk variables, the effect on debt maturity is positive and insignificant. While for syndicated, leverage and size variables, the results is insignificantly negative. For size and profitability (ROA), the results show negative and significant effect on debt maturity. But for log amount, country risk and secure variables, the indication show significantly positive effect on debt maturity. While for takeover variable, it show positive and insignificant effect, then for syndicated, debt repayment, and leverage variables, all show negative and insignificant effect.

Hypothesis testing using t-test for listed high leverage and non crisis, debt repayment, senior, and takeover variables, all show significantly negative effect on debt maturity. But for working capital and secure variables, the results show positive and significant effect on debt maturity. While for syndicated, log amount, and profitability (ROA) variables, the indication show positive and insignificant effect on debt maturity. And for leverage, size and country risk variables, the results is negative and insignificant. From hypothesis testing using t-test, the indication show negative and significant effect on debt maturity for listed low leverage, debt repayment, takeover, and working capital variables. But for secure and log amount variables, the effect on debt maturity is significantly positive. While for leverage and size variables, the indication show positive and insignificant effect. Profitability (ROA), country risk, and syndicated variables show negative and insignificant effect as a results. For listed low leverage and crisis variables, the results show positive and significant effect on syndicated variable, while working capital variable show negative and significant effect on debt maturity. While for log amount, secured, and country risk variables, the effect is insignificantly positive, and for profitability (ROA), size, leverage, debt repayment, and takeover variables, the indication is significantly negative. For listed low leverage and non crisis variables, the test results show positive and significant effect on secured variable, where debt repayment, takeover, and profitability (ROA) variables show negative and significant effect on debt maturity. For log amount, and leverage variables, both have positive and insignificant effect, while for size, syndicate and country risk variables, the results show negative and insignificant effect.

The coefficient of determination (R^2) for all sample test is 0.0919, for listed and crisis test is 0.048177, for listed and non crisis test is 0.139724, for non listed and crisis test 0.102747, for non listed and non crisis test is 0.059279, for listed with performance and crisis test is 0.128105, for listed with performance and non crisis test is 0.161354, for listed high leverage test is 0.28284651, for listed high leverage and crisis test is 0.598623, for listed high leverage and non crisis test is 0.289721, for listed low leverage test is 0.091364, for listed low leverage and crisis test is 0.017158, and for listed low leverage and non crisis test os 0.115493.

Based on the results of this study, the first recommendation for the firm is to have long term debt maturity in a situation where the country risk level is high during the crisis period (2009-2010). And for high profit and big size firm, it will be best to take external financing or external equity. Second recommendation for lenders to develop loan approval concept, in order to get high revenue with low risk. Third recommendation for investor to invest by buying shares in company with high profitability and big size. In the situation where the country risk level is high, investor should invest on domestic firms because a high level of country risk will have a significant impact to multinational corporation. The last recommendation is for student and fellow researcher who plan to undertake similar research, it will be better to add dependent variables to create two stage least square with the same 13 test models. By using that kind of method, it is highly possible to produce significant effect on the test results.

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Preparing a two column paper with MS Word for Windows

A.T. Balkema & G. Westers
A.A. Balkema Publishers, Rotterdam, Netherlands

B. Unknown
New Institute, Gouda, Netherlands

ABSTRACT: Authors of papers to proceedings have to type these in a form suitable for direct photographic reproduction by the publisher. In order to ensure uniform style throughout the volume, all the papers have to be prepared strictly according to the instructions set below. A laser printer should be used to print the text. The publisher will reduce the camera-ready copy to 75% and print it in black only. For the convenience of the authors template files for MS Word 6.0 (and higher) are provided. provided AUTHORS: Do not include author's title (Prof., Dr.), position (president, research engineer), or degrees (ph. D., M Sc., M. E.). The abstract should contain the objectives and significance of the paper, method of analysis, and conclusion and is limited to 150 words. **FULL PAPER: The overall length of the paper is limited to 4 pages**. For publishing the papers as e-book, a form 'Consent to Publish for Contributors to Books' has to be signed. The form will be provided on the conference home-page. Please upload the signed 'Consent to Publish for Contributors to Books' online as well.

1 GENERAL INSTRUCTIONS

1.1 *Type area*

The text should fit exactly into the type area of 187 × 272 mm (7.36" × 10.71"). For correct settings of margins in the Page Setup dialog box (File menu) see Table 1.

1.2 *Typefont, typesize and spacing*

Use Times New Roman 12 point size and 13 point line spacing (Standard;text tag). Use roman type except for the headings (Heading tags), parameters in mathematics (not for log, sin, cos, ln, max., d (in d*x*), etc), Latin names of species and genera in botany and zoology and the titles of journals and books which should all be in italics. Never use bold, except to denote vectors in mathematics. Never underline any text. Use the small font (10 points on 11 points) for tables (Table tags), figure captions (Figure caption tag) and the references (Reference text tag).

Never use letterspacing and never use more than one space after each other.

2 GETTING STARTED

2.1 *Preparing the new file with the correct template*

Copy the template file B2ProcA4.dot (if you print on A4 size paper) or B2ProcLe.dot (for Letter size paper) to the template directory. This directory can be found by selecting the Tools menu, Options and then by tabbing the File Locations. When the Word programme has been started open the File menu and choose New. Now select the template B2ProcA4.dot or B2ProcLe.dot (see above). Start by renaming the document by clicking Save As in the menu Files. Name your file as follows: First three letters of the file name should be the first three letters of the last name of the first author, the second three letters should be the first letter of the first three words of the title of the paper (e.g. this paper: balpcc.doc). Now you can type your paper, or copy the old version of your paper onto this new formated file.

2.2 *Copying old text onto new file*

Open your old file and the new file. Switch between these two with the Window menu. Select all text of the old file (excluding title, authors, affiliations and abstract) and paste onto bottom of new file, after having deleted the word INTRODUCTION (see also section 2.5). Check the margin setting (Page Setup dialog box in File menu) and column settings (see Table 1 for correct settings). After this copy the texts which have to be placed in the frames (see sections 2.3 and 2.4). In order to avoid disruption of the text and frames, copy these texts paragraph by paragraph without including the first word (which includes the

Table 1. Margin settings for A4 size paper and letter size paper.

Setting	A4 size paper		Letter size paper	
	cm	inches	cm	inches
Top	1.2	0.47"	0.32	0.13"
Bottom	1.3	0.51"	0.42	0.17"
Left	1.15	0.45"	1.45	0.57"
Right	1.15	0.45"	1.45	0.57"
All other	0.0	0.0"	0.0	0.0"
Column width*	9.0	3.54"	9.0	3.54"
Column spacing*	0.7	0.28"	0.7	0.28"

* Column dialog box in Format menu.

old tag). It is best to first retype the first words manually and then to paste the correct text behind. When the new file contains all the text, the old tags in the text should be replaced by the new Balkema tags (see section 3). Before doing this apply automatic formatting (AutoFormat in Format menu).

2.3 *Title, author and affiliation frame*

Place the cursor on the T of Title at the top of your newly named file and type the title of the paper in lower case (no caps except for proper names). The title should not be longer than 75 characters). Delete the word Title (do not delete the paragraph end). Place the cursor on the A of A.B.Author(s) and type the name of the first author (first the initials and then the last name). If any of the co-authors have the same affiliation as the first author, add his name after an & (or a comma if more names follow). Delete the words A.B. Author etc. and place the cursor on the A of Affiliation. Type the correct affiliation (Name of the institute, City, State/Province, Country). Now delete the word Affiliation. If there are authors linked to other institutes, place the cursor at the end of the affiliation line just typed and give a return. Now type the name(s) of the author(s) and after a return the affiliation. Repeat this procedure until all affiliations have been typed.

All these texts fit in a frame which should not be changed (Width: Exactly 187 mm (7.36"); Height: Exactly 73 mm (2.87") from top margin; Lock anchor).

2.4 *Abstract frame*

If there are no further authors place the cursor one space behind the word ABSTRACT: and type your abstract of not more than 150 words. The top of the first line of the abstract will be 73 mm (2.87") from the top of the type area. The complete abstract will fall in the abstract frame, the settings of which should also not be changed (Width: Exactly 187 mm (7.36"); Height: Automatic; Vertical 73 mm (2.87") from margin; Lock anchor).

2.5 *First line of text or heading*

If your text starts with a heading, place the cursor on the I of INTRODUCTION and type the correct text for the heading. Now delete the word INTRODUCTION and start with the text after a return. This text should have the tag First paragraph.

If your text starts without a heading you should place the cursor on the I of INTRODUCTION, change the tag to First paragraph and type your text after deleting the word INTRODUCTION.

3 LAYOUT OF TEXT

3.1 *Text and indenting*

Text is set in two columns of 9 cm (3.54") width each with 7 mm (0.28") spacing between the columns. All text should be typed in Times New Roman, 12 pt on 13 pt line spacing except for the paper title (18 pt on 20 pt), author(s) (14 pt on 16 pt), and the small text in tables, captions and references (10 pt on 11 pt). All line spacing is exact. Never add any space between lines or paragraphs. When a column has blank lines at the bottom of the page, add space above and below headings (see opposite column).

First lines of paragraphs are indented 5 mm (0.2") except for paragraphs after a heading or a blank line (First paragraph tag).

3.2 *Headings*

Type primary headings in capital letters roman (Heading 1 tag) and secondary and tertiary headings in lower case italics (Headings 2 and 3 tags). Headings are set flush against the left margin. The tag will give two blank lines (26 pt) above and one (13 pt) beneath the primary headings, 1½ blank lines (20 pt) above and a ½ blank line (6 pt) beneath the secondary headings and one blank line (13 pt) above the tertiary headings. Headings are not indented and neither are the first lines of text following the heading indented. If a primary heading is directly followed by a secondary heading, only a ½ blank line should be set between the two headings. In the Word programme this has to be done manually as follows: Place the cursor on the primary heading, select Paragraph in the Format menu, and change the setting for spacing after, from 13 pt to 0 pt. In the same way the setting in the secondary heading for spacing before should be changed from 20 pt to 7 pt.

3.3 *Listing and numbering*

When listing facts use either the style tag List signs or the style tag List numbers.

3.4 *Equations*

Use the equation editor of the selected word processing programme. Equations are not indented (Formula tag). Number equations consecutively and place the number with the tab key at the end of the line, between parantheses. Refer to equations by these numbers. See for example Equation 1 below:

From the above we note that sin θ = (*x* + *y*)*z* or:

$$K_t = \left(1 - \frac{R^2 \tau}{c_a + \nu \tan \delta}\right)^4 k_1 \qquad (1)$$

where c_a = interface adhesion; δ = friction angle at interface; and k_1 = shear stiffness number.

For simple equations in the text always use superscript and subscript (select Font in the Format menu). Do not use the equation editor between text on same line.

The inline equations (equations within a sentence) in the text will automatically be converted to the AMS notation standard.

3.5 *Tables*

Locate tables close to the first reference to them in the text and number them consecutively. Avoid abbreviations in column headings. Indicate units in the line immediately below the heading. Explanations should be given at the foot of the table, not within the table itself. Use only horizontal rules: One above and one below the column headings and one at the foot of the table (Table rule tag: Use the Shift-minus key to actually type the rule exactly where you want it). For simple tables use the tab key and not the table option. Type all text in tables in small type: 10 on 11 points (Table text tag). Align all headings to the left of their column and start these headings with an initial capital. Type the caption above the table to the same width as the table (Table caption tag). See for example Table 1.

3.6 *Figure captions*

Always use the Figure caption style tag (10 points size on 11 points line space). Place the caption underneath the figure (see Section 5). Type as follows: ‘Figure 1. Caption.’ Leave about two lines of space between the figure caption and the text of the paper.

3.7 *References*

In the text, place the authors’ last names (without initials) and the date of publication in parentheses (see examples in Section 5). At the end of the paper, list all references in alphabetical order underneath the heading REFERENCES (Reference heading tag). The references should be typed in small text (10 pt on 11 pt) and second and further lines should be indented 5.0 mm (0.2") (Reference text tag). If several works by the same author are cited, entries should be chronological:

Larch, A.A. 1996a. Development ...
Larch, A.A. 1996b. Facilities ...
Larch, A.A. 1997. Computer ...
Larch, A.A. & Jensen, M.C. 1996. Effects of ...
Larch, A.A. & Smith, B.P. 1993. Alpine ...

3.7.1 *Typography for references*

Last name, First name or Initials (ed.) year. *Book title*. City: Publisher.

Last name, First name or Initials year. Title of article. *Title of Journal* (series number if necessary) volume number (issue number if necessary): page numbers.

3.7.2 *Examples*

Grove, A.T. 1980. Geomorphic evolution of the Sahara and the Nile. In M.A.J. Williams & H. Faure (eds), *The Sahara and the Nile*: 21-35. Rotterdam: Balkema.

Jappelli, R. & Marconi, N. 1997. Recommendations and prejudices in the realm of foundation engineering in Italy: A historical review. In Carlo Viggiani (ed.), *Geotechnical engineering for the preservation of monuments and historical sites*; *Proc. intern. symp., Napoli, 3-4 October 1996*. Rotterdam: Balkema.

Johnson, H.L. 1965. Artistic development in autistic children. *Child Development* 65(1): 13-16.

Polhill, R.M. 1982. *Crotalaria in Africa and Madagascar*. Rotterdam: Balkema.

3.8 *Notes*

These should be avoided. Insert the information in the text. In tables the following reference marks should be used: *, **, etc. and the actual footnotes set directly underneath the table.

3.9 *Conclusions*

Conclusions should state concisely the most important propositions of the paper as well as the author’s views of the practical implications of the results.

4 PHOTOGRAPHS AND FIGURES

Number figures consecutively in the order in which reference is made to them in the text, making no distinction between diagrams and photographs. Figures should fit within the column width of 90 mm (3.54") or within the type area width of 187 mm (7.36").
Figures, photographs, etc. can be in black/white or full color, but will be produced in the book in black/white only. Paste copies of the same size onto the typescript where you want them to appear in the text. Do not place them sideways on a page; however if this cannot be avoided, no other text (except the figure caption) should appear on that page. Figures, etc. should not be centered, but placed against the

left margin. Leave about two lines of space between the actual text and figure (including caption). Never place any text next to a figure. Leave this space blank. The most convenient place for placing figures is at the top or bottom of the page. Avoid placing text between figures as readers might not notice the text. Keep in mind that everything will be reduced to 75%. Therefore, 9 point should be the minimum size of the lettering. Lines should preferably be 0.2 mm (0.1") thick. Keep figures as simple as possible. Avoid excessive notes and designations.

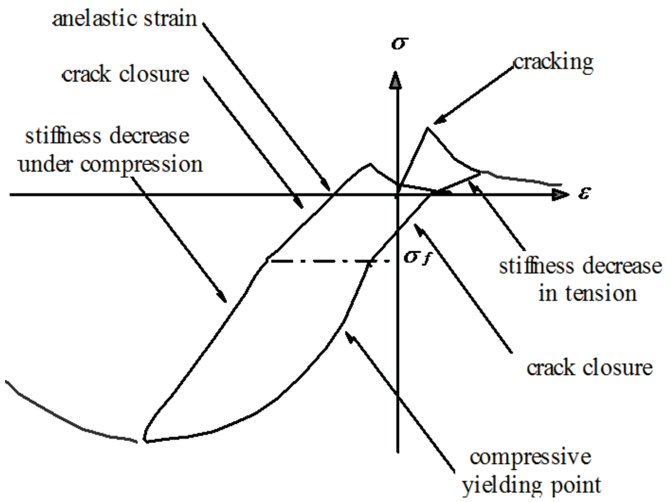

Figure 1. Caption of a typical figure. Photographs will be scanned by the printer. Always supply original photographs.

Photographs should be with good contrast and on glossy paper. Photographic reproductions cut from books or journals, photocopies of photographs and screened photographs are unacceptable. The proceedings will be printed in black only. For this reason avoid the use of colour in figures and photographs. Colour is also nearly always unnecessary for scientific work.

5 PREFERENCES, SYMBOLS AND UNITS

Consistency of style is very important. Note the spacing, punctuation and caps in all the examples below.

– *References in the text:* Figure 1, Figures 2-4, 6, 8a, b (not abbreviated)
– *References between parentheses:* (Fig. 1), (Figs 2-4, 6, 8a, b) (abbreviated)
– USA / UK / Netherlands / the Netherlands *instead of* U.S.A. / U.K. / The Netherlands
– Author & Author (1989) *instead of* Author and Author (1989)
– (Author 1989a, b, Author & Author 1987) *instead of* (Author, 1989a,b; Author and Author, 1987)
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Always use the official SI notations:

– kg / m / kJ / mm *instead of* kg. (Kg) / m. / kJ. (KJ) / mm.;
– 20°16′32″SW *instead of* 20° 16′ 32″ SW
– 0.50 *instead of* 0,50 (*used in French text*); 9000 *instead of* 9,000 *but if more than* 10,000: 10,000 *instead of* 10000
– ^{14}C *instead of* C^{14} / C-14 *and* BP / BC / AD *instead of* B.P. / B.C. / A.D.
– × 20 *instead of* ×20 / X20 / x 20; 4 + 5 > 7 *instead of* 4+5>7 *but* –8 / +8 *instead of* – 8 / + 8
– e.g. / i.e. *instead of* e.g., / i.e.,

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The camera-ready copy of the complete paper printed on a high resolution printer on one side of the paper as well as two copies of the paper should be sent to the editor after receiving the final acceptance notice. The paper should be sent together with the signed Copyright form. Include the original photographs. Check whether the paper looks the same as this sample: Title at top of first page in 18 points, authors in 14 points and all other text in 12 points on 13 points line space, except for the small text (10 point on 11 point line space) used in tables, captions and references. Also check if the type width is 187 mm (7.36"), the column width 90 mm (3.54"), the page length is 272 mm (10.71") and that the space above the Abstact is exactly as in the sample. Write your name and the shortened title of the paper in pencil in the bottom margin of each page and number the pages correctly.

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The above material should be with the editor before the deadline for submission. Any material received too late will not be published. Send the material by airmail or by courier well packed and in time. Be sure that all pages are included in the parcel.