Sovereign Bankruptcy in the Perspective of the ASEAN Integration

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Abstract

This paper recognizes the presence of sovereign debt as primary means of financing its expenditures. It practically covers the gaps between cash outflows and inflows from a country's revenues such as those coming from taxes. However, when a country's debt goes too high that it already has difficulty in paying it off, sovereign bankruptcy occurs. This study dwells at the factors that lead to sovereign bankruptcy among ASEAN countries in terms of business confidence, credit management, resource availability and market stability. To measure the indicators in determining the nations in the verge of being bankrupt, the researchers use the data depicting the corruption perception index, GDP and investment climate index. Furthermore, data regarding the ease of doing business rankings, credit ratings, surplus/deficit of the government budget, external debt, current account balance and inflation rate are also considered. These indicators are believed to be suggestive of a country's capability of sustaining its overall debt, highlighting the point that an ASEAN country should take into account all its resources to ensure that it doesn't go bankrupt as a nation especially now that it is looking into integrating itself into one economic ASEAN community.

Keywords: ASEAN, ASEAN integration, sovereign debt, sovereign bankruptcy

1.0 Introduction

Managing one's business enterprise can be very crucial especially when the organization is daunted with a lot of unknown possibilities. These possibilities will either push the business to higher grounds or the other way around. Since primarily the goal of the business is to gain profit out of its operation, proper management of its resources is a critical factor for its progress and development. Right decisions are also made in order to maximize potential returns from investments. However, if these assets are not well-managed, the supposed progress is unlikely to occur. More often than not, companies will experience financial difficulties and will further lead to what we commonly know as bankruptcy.

Bankruptcy then becomes more severe as it leads to the sad conclusion of the impermanence of every entity. With the dozens of companies going bankrupt every day, companies become alarmed that they might be the next to experience such loss. Although the companies have their going concern assumptions, it cannot be denied that it still faces the risk of bankruptcy now and then. Hence, avoiding it as much as possible is the goal of every business.

Bankruptcy, according to the Organisation for Economic Cooperation and Development (2013), refers to the initiation of legal proceedings (insolvency) when an enterprise cannot guarantee the payment of its monetary obligations. It implies that when an entity goes bankrupt, it is unable to do the usual activities that it regularly does. Some firms may continue to live while others stop trading immediately. In a nation's perspective, however, bankruptcy does not stop there. The pain is felt on very deep levels. Institutions and systems where people greatly depend on disappear.

Furthermore, it can be ascertained that when a country experiences in solvencies like that in Argentina in 1999, wealthy people are expected to take away their money and flee the country. It will eventually result in a run on the banks and a collapse of the country's national currency. Somehow, it reduces the investment confidence of other countries. It also has a greater impact on the residents of the state which may be equated to lost jobs and higher taxes.

Bankruptcy crisis had become a primary concern of most countries regardless of their progress status. This holds true in the Euro area especially, in Greece wherein their currency collapsed as a result of its debt crisis. Furthermore, there are no legal and political procedures for restructuring debt when bankruptcy occurs. (Buchheit et al., 2013).

It is to be taken into consideration that serious sovereign debt crises emerge from both internal and external sources. For example, debt crisis can be linked to a country's fiscal policy. When a country accumulates too much budgetary deficit, domestic bankruptcy can happen. The banking crises also increase the public debt of a particular country. External shocks such as the global financial crises or the poor performance of a country in terms of trade can also be associated with the emerging sovereign debt crises (Balcerowicz, 2010).

Buckley (2009) further argued that a bankruptcy regime is a central part of each national financial system. Bankruptcy in countries can be widely associated with sovereign defaults. It is merely the failure of a country to pay back its debts when due. When the countries are in default of their debts, borrowing from other countries will be very difficult. Bankruptcy laws also vary across countries. This variation makes the concept of bankruptcy among countries difficult to compare.

The World Bank has developed the "Goals-of-Insolvency Index". It is an indicator of bankruptcy which averages the cost and time of insolvency, the preservation of absolute priority of claims, and the efficient outcome achieved (Businessline, 2003). The total goals of insolvency index ranges from 0-100 wherein a score of 100 indicates perfect efficiency of insolvency system while a score of 0 means that the insolvency system does not function at all(Velasco, 2006). The index, however, has not included some other factors that may lead to bankruptcy of a country. Also, the results of the index were based on a grouping of countries based on their respective regions in the world. South Asia (SA) and East Asia and the Pacific (EAP) which comprise the ASEAN Countries and other Asian countries scored 47 which imply that its insolvency system is on the average rank compared to the other grouping of countries. No other literature showing bankruptcy indicators of a country was found.

This study aimed to look into the different indicators of bankruptcy among sovereigns in relation to the 10 ASEAN Countries namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. Variables such as the Corruption Perception Index, Gross Domestic Product, Investment Climate Index, Ease of Doing Business Rankings, Credit Ratings, Surplus/Deficit of Government Budget, External Debts, Current Account Balances, and Inflation Rates are taken into consideration to understand fully and eventually avoid the occurrence of bankruptcy among ASEAN Countries.

It is believed that this study will subsequently lend insights on the ASEAN countries' legislators to improve further their management of sovereign debt. Recognizing the different possible indicators that may suggest either bankruptcy or sovereign default, it will be a useful tool to evaluate the present condition of the ASEAN countries on the brink of its emerging integration.

2.0 Design and Methods

In order to gather the necessary data for the study, the researchers employed the process called exploratory data analysis or commonly known as data mining. Information from various databases was collected and then compared to identify points of similarities and differences regarding the viewpoints of other scholars towards the topic. Furthermore, an analysis of the data gathered was made to come up with a sound conclusion for the study.

The following variables are considered as indicators of sovereign bankruptcy and were derived from credible sources. The countries of the Association of Southeast Asian Nation namely Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam were subjected to the study.

1. Corruption Perception Index (CPI) – is a ranking of 175 countries based on how corrupt the public sector is as perceived by the citizens belonging to that individual country (Transparency International, 2014). The index is scaled from 0-100 wherein 0 denotes the country is seen as being highly corrupt while a score of 100 means that the country is seen to be free from corruption. The information used is the CPI as of 2014.
2. Gross Domestic Product (GDP) – is the total of the final uses of goods and services measured in buyers' prices less the value of imports, or the total of primary incomes distributed by resident producers (Talento, 2012). According to Investopedia, it is the monetary value of all the finished goods and services produced within a country's borders. The data presented are the current prices and are denominated in US million dollars. A country with a high GDP indicates that it is doing well. All the information used is from the World Bank for the year 2013 except for Myanmar in which its GDP is for the year 2012.
3. Investment Climate Index (ICI) – is composed of foreign direct investments and exports of a country. The weight of each component is computed using the principal components analysis in which only the ASEAN member countries were subjected to the index. A higher ICI for a country suggests that it is more enticing for business investments. The data is lifted from a study of nation branding of ASEAN member countries (Zanoria, Uy&Borlasa, 2015).
4. Ease of Doing Business Rankings – ranks 189 economies based on the collective distance of frontier scores. This measure shows how close each economy is to the global best practices in business regulation in terms of starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency

(World Bank, 2014). The original data per source indicated that the country with the highest rank (Rank 1) is the state that is perceived to be the easiest in putting up a business. However, to be consistent with the rest of the indicators, the researchers reversed the ranking. As such, Rank 1 would now represent the country that is least easy to do business with while rank 189 represents the country determined to be easiest to do business with.

5. Credit Ratings – is a rating that gives investors an idea of the risks associated with investing in a particular country. The figures presented are the average scores given by credit rating agencies such as Standard and Poors, Moody's, and Fitch. Multiple economic indicators, exchange rates, government bond yields, stock indices and commodity prices are also added to the average grade per country (Trading Economics, 2014). A higher credit rating means that a country has a lesser risk of defaulting in the payment of its debts.

6. Surplus/Deficit of Government Budget – is the excess or shortage of national government revenues after deducting its expenditures. The amounts are represented as a percentage of GDP. A positive (+) number denotes a budget surplus while a negative (-) number denotes a budget deficit. This indicator determines the solvency of the government. The data used is for the year 2013 except for Myanmar in which its percentage of surplus/deficit of government budget to GDP is for the year 2012.

7. External Debt – is the total debt of an ASEAN country towards its foreign country investors. The figures shown are the ratios of government debt to GDP per ASEAN member countries for the year 2013 except for Myanmar in which its percentage of government debt to GDP is for the year 2012. To simplify the analysis, the researchers took the complement of this ratio (i.e. 100% minus the percentage of government debt to GDP). Hence, a high percentage means a country has fewer debts.

8. Current Account Balance (CAB) – is the sum of net exports and net primary and secondary income as defined by the World Bank. According to CIA's The World Factbook, it is simply a comparison of a country's net trade earnings and net transfer payments across the world. A positive CAB indicates that a country has more exports than its imports. The data presented are a percentage of GDP of each ASEAN country for the year 2013 except for Myanmar in which its percentage of CAB to GDP is for the year 2012.

9. Inflation Rate – is the rate at which the general level of prices increases while the purchasing power decreases. The researchers reversed the original data to be consistent with the other indicators. The higher the figure, the less is a country's inflation rate. The formula used was 100-Actual Inflation Rate. The data used is the inflation rate of each ASEAN member countries for the year 2013.

Information on the above indicators towards the ASEAN member nations were compiled and tested. The variables were subjected to factor analysis to identify the indicators that registered high communalities. Through principal components analysis, indices were computed to determine the country that dominates over the others in terms of the factors previously recognized. The overall index will define the ranking of the ASEAN nations who will least likely go bankrupt.

3.0 Results and Discussion

The above indicators were statistically examined to determine the ranking of the ASEAN countries less likely go bankrupt as presented in Table 1.

Table 1: Sovereign Bankruptcy Indicators

Country	CPI	GDP	ICI	Ease	CR	S/D	ED	CAB	IR
Brunei Darussalam	60	16,111	0.01498	89	15.00	11.40	97.54	43.00	99.80
Cambodia	21	15,239	0.02102	55	30.00	-5.00	71.88	-8.60	95.37
Indonesia	34	868,346	0.30413	76	48.51	-2.30	75.97	-3.20	91.62
Lao PDR	25	11,243	0.00704	42	15.00	-12.40	37.97	-29.50	93.13
Malaysia	52	313,159	0.20278	172	66.50	-3.90	45.20	4.70	96.78
Myanmar	21	59,444	0.04322	13	15.00	-3.85	52.73	-4.40	95.07
Philippines	38	272,067	0.06365	95	45.63	-1.40	54.60	4.20	95.89
Singapore	84	297,941	1.00000	189	98.60	1.10	-5.50	18.00	98.50
Thailand	38	387,252	0.21436	164	58.82	-2.50	54.30	-0.70	98.33
Viet Nam	31	171,390	0.14676	112	25.23	-7.10	45.02	6.50	93.97

It can be inferred from the data in Table 1 that among the nine indicators, Singapore and Brunei Darussalam are closely competing for the top spot. Singapore ranked the highest in four indicators namely the Corruption Perception Index, Investment Climate Index, Ease of Doing Business Rankings and Credit Ratings. It means that Singapore leads the other ASEAN nations when it comes to accepting businesses from around the world mainly because the country earned the trust and confidence of the other nations that their businesses would not falter if they invest their resources there. Brunei Darussalam, on the other hand, ranked 1st in terms of Surplus/Deficiency of Government Budget, External Debt, Current Account Balance and Inflation Rate. It implies that Brunei has more than enough resources to comply with its obligations and that the prices of their commodities are more stable than the rest of the ASEAN nations. The remaining indicator that is the GDP is dominated by Indonesia.

The researchers then performed factor analysis using the same data in Table 1. The indicators that manifested high correlations were gathered into a particular factor. Four factors were extracted from the indicators, and the results are shown in Table 2 as follows:

Table 2: Unrotated Factor Loadings and Communalities

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Communality
CPI	0.9530	0.1070	-0.0680	-0.1590	0.949
GDP	0.2640	-0.4100	0.8660	0.0360	0.989
ICI	0.8240	-0.4410	-0.0040	-0.3160	0.973
Ease	0.8650	-0.2040	0.0070	0.4150	0.962
CR	0.8390	-0.4700	0.1090	0.1360	0.956
S/D	0.5680	0.7650	0.2320	-0.1540	0.985
ED	-0.4530	0.7120	0.4910	0.1580	0.977
CAB	0.6530	0.6970	0.1100	-0.1300	0.941
IR	0.6860	0.5450	-0.3500	0.2520	0.954
Variance	4.5331	2.5102	1.1956	0.4466	8.6855
% Variance	0.504	0.279	0.133	0.050	0.965

Factor 1 shows high factor loadings on the variables CPI, ICI, Ease, and CR. It is interesting to note that all these indicators have a bearing on the business identity of a country. CPI, ICI, and Ease all influence an investor's decision towards putting up a business in a particular nation. On the other hand, CR reflects the risk of a country defaulting in its debt payments which also could significantly affect the number of investors that would gamble into doing business with a nation. As such, the researchers wish to refer to this factor as the "business confidence" of a country.

The second factor shows high factor loadings on the indicators S/D, ED, CAB, and IR. CAB and S/D both pertain to a nation's monetary resources. As such, CAB encompasses government revenues coming from trading across countries while S/D reflects the net fund after deducting the government expenditures from all its revenues. Furthermore, ED and IR pertain to a country's credit. ED, being a country's debt is interrelated to IR in the sense that inflation rates can greatly affect the present value of the external debts of a nation. To connect the two subjects, monetary resources and credit, the researchers then inferred that this factor shows the ability of a country to allocate effectively its financial resources with regards to attending to its credit obligations. Thus, this factor is referred to as "credit management".

Factor 3 contains only one indicator that gave the highest factor loading. This indicator is the GDP. The researchers refer this factor as "resource availability" since GDP reflects the goods and services produced in a country that could also equate to the availability of the resources of the country that indicate its economic prosperity.

Finally, the indicators Ease and IR show high factor loadings for Factor 4. Considering that inflation can abruptly alter the stability of prices which in return makes businesses difficult to operate, the researchers opted to call the 4th factor as "market stability". In addition, the factor analysis revealed that 96.5% of Sovereign Bankruptcy can be explained by the factors Business Confidence, Credit Management, Resource Availability and Market Stability. The factors mentioned above with their respective dominant indicators are shown in Table 3 as follows:

Table 3: Sovereign Bankruptcy Indicators and Factors

Factor	Indicators
Business Confidence	Corruption Perception Index (CPI), Investment Climate Index (ICI), Ease of Doing Business Rankings, Credit Ratings
Credit Management	Surplus/Deficiency of Government Budget, External Debts, Current Account Balances (CAB), Inflation Rate
Resource Availability	Gross Domestic Product (GDP)
Market Stability	Ease of Doing Business Rankings, Inflation Rate

The researchers proceeded with the process of Principal Component Analysis to assign corresponding weights to the factors mentioned above. The result for the Business Confidence Index is presented in the next table using the following data:

Eigenanalysis of the Covariance Matrix

Eigenvalue	4250.5	192.6	148.6	0.0
Proportion	0.926	0.042	0.032	0.000
Cumulative	0.926	0.968	1.000	1.000

Variable	PC1	PC2	PC3	PC4
CPI	0.240	0.466	0.852	-0.007
ICI	0.003	0.012	0.001	1.000
Ease	0.895	-0.445	-0.009	0.002
CR	0.375	0.765	-0.524	-0.010

From the above data, the Business Confidence Index (BCI) of the country was computed. The formula used to arrive at the BCI is presented below:

$$\text{BCI Raw Score} = \frac{.240\text{CPI} + .003\text{ICI} + .895\text{Ease} + .375\text{CR}}{1.513}$$

Equation 1: BCI Raw Score

$$\text{BCI} = \frac{\text{BCI Raw Score}}{\text{Maximum BCI Raw Score}}$$

Equation 2: Business Confidence Index (BCI)

Based on Equations 1 and 2, the following table shows the business confidence index of the ASEAN countries.

Table 4: Business Confidence Index among ASEAN Countries

ASEAN Country	CPI	ICI	Ease	CR	Raw Score	BCI
Brunei Darussalam	9.51751	0.00003	52.64706	3.71778	65.88	0.44049
Cambodia	3.33113	0.00004	32.53470	7.43556	43.30	0.28951
Indonesia	5.39326	0.00060	44.95704	12.02330	62.37	0.41704
Lao PDR	3.96563	0.00001	24.84468	3.71778	32.53	0.21748
Malaysia	8.24851	0.00040	101.74488	16.48215	126.48	0.84562
Myanmar	3.33113	0.00009	7.69002	3.71778	14.74	0.09855
Philippines	6.02776	0.00013	56.19630	11.30948	73.53	0.49165
Singapore	13.32452	0.00198	111.80106	24.43820	149.57	1.00000
Thailand	6.02776	0.00043	97.01256	14.57865	117.62	0.78641
Viet Nam	4.91738	0.00029	66.25248	6.25330	77.42	0.51765

The nation with the highest business confidence index is Singapore and the lowest is Myanmar. This result is based on the fact that Singapore consistently ranked on top on all four indicators while Myanmar ranks the least on 3 out of the 4 indicators (Corruption Perception Index, Ease of Doing Business and Credit Ratings) shown.

The second factor that would be taken into consideration is the Credit Management. The principal component analysis was again used to compute for the respective weights of its component indicators. Furthermore, equations 3 and 4 are crafted based on the results of the analysis as displayed below:

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Eigenanalysis of the Covariance Matrix

Eigenvalue   777.84   346.73    4.50    2.04
Proportion    0.688    0.307   0.004   0.002
Cumulative    0.688    0.994   0.998   1.000


Variable     PC1      PC2      PC3      PC4
S/D        0.120   -0.256   -0.782    0.556
ED         0.954    0.297    0.021   -0.040
CAB        0.275   -0.914    0.289   -0.075
IR         0.009   -0.104   -0.553   -0.827
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$$\text{CMI Raw Score} = \frac{.120S/D + .954ED + .275CAB + .009IR}{1.358}$$

Equation 3: CMI Raw Score

$$\text{CMI} = \frac{\text{CMI Raw Score}}{\text{Maximum CMI Raw Score}}$$

Equation 4: Credit Management Index (CMI)

Equations 3 and 4 yielded the following values in Table 4 which shows the CMI among the ASEAN countries.

Table 5: Credit Management Index among ASEAN Countries

ASEAN Country	S/D	ED	CAB	IR	Raw Score	CMI
Brunei Darussalam	1.00736	68.52221	8.70766	0.66141	78.89865	1.00000
Cambodia	-0.44183	50.49596	-1.74153	0.63206	48.94466	0.62035
Indonesia	-0.20324	53.36920	-0.64801	0.60722	53.12517	0.67333
Lao PDR	-1.09573	26.67406	-5.97386	0.61724	20.22172	0.25630
Malaysia	-0.34462	31.75317	0.95177	0.64138	33.00169	0.41828
Myanmar	-0.34021	37.04302	-0.89102	0.63008	36.44187	0.46188
Philippines	-0.12371	38.35670	0.85052	0.63550	39.71901	0.50342
Singapore	0.09720	-3.86377	3.64507	0.65283	0.53132	0.00673
Thailand	-0.22091	38.14595	-0.14175	0.65168	38.43496	0.48714
Viet Nam	-0.62739	31.62672	1.31627	0.62275	32.93834	0.41748

In this factor, Brunei Darussalam led the other ASEAN Countries. It is explained by the fact that it ranked the highest on all four indicators. Singapore however, which previously ranked first in the business confidence index suddenly dropped to the last place in the credit management index. Singapore's external debt (the indicator with the highest weight) exceeded its GDP causing the nation to fall below the other ASEAN member countries.

The third factor to be considered is the resource availability. In computing the Resource Availability Index, the particular GDP of a country immediately becomes the raw score. The raw score for resource availability is then divided by the maximum of the raw scores for resource availability in order to arrive at the Resource Availability Index (RAI). The results are as follows:

Table 6: Resource Availability Index among ASEAN countries

ASEAN Country	GDP	Raw Score	RAI
Brunei Darussalam	16,111	16,111	0.01855
Cambodia	15,239	15,239	0.01755
Indonesia	868,346	868,346	1.00000
Lao PDR	11,243	11,243	0.01295
Malaysia	313,159	313,159	0.36064
Myanmar	59,444	59,444	0.06846
Philippines	272,067	272,067	0.31332
Singapore	297,941	297,941	0.34311
Thailand	387,252	387,252	0.44597
Viet Nam	171,390	171,390	0.19738

The country with the highest GDP is Indonesia. According to the World Bank's 2015 GDP ranking, Indonesia even ranked 16th among the countries throughout the world. The ASEAN country which follows Indonesia is Thailand. Thailand ranked 30th (almost half of Indonesia's ranking) which means that in terms of resource availability Indonesia is exceptionally superior compared to the rest of the ASEAN member nations.

Finally, the last factor is the Market Stability. The weights of its indicators were determined using the Principal Components Analysis. An index was also computed using the succeeding formulae:

```
Eigenanalysis of the Covariance Matrix

Eigenvalue  3448.7    4.6
Proportion   0.999  0.001
Cumulative   0.999  1.000


Variable    PC1      PC2
Ease       1.000  -0.024
IR         0.024   1.000
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$$\text{MSI Raw Score} = \frac{1.000\text{Ease} + .024\text{IR}}{1.024}$$

Equation 5: MSI Raw Score

$$\text{MSI} = \frac{\text{MSI Raw Score}}{\text{Maximum MSI Raw Score}}$$

Equation 6: Market Stability Index (MSI)

The results of the computations are presented in Table 7.

Table 7: Market Stability Index among ASEAN countries

ASEAN Country	Ease	IR	Raw Score	MSI
Brunei Darussalam	86.91	2.33906	89.25	0.47760
Cambodia	53.71	2.23524	55.95	0.29937
Indonesia	74.22	2.14741	76.37	0.40864
Lao PDR	41.02	2.18285	43.20	0.23116
Malaysia	167.97	2.26822	170.24	0.91095
Myanmar	12.70	2.22823	14.92	0.07986
Philippines	92.77	2.24743	95.02	0.50846
Singapore	184.57	2.30869	186.88	1.00000
Thailand	160.16	2.30464	162.46	0.86934
Viet Nam	109.38	2.20231	111.58	0.59706

The indices presented in Table 7 suggest that the country with the most stable market is Singapore. It is evidenced by its high ranking in Ease of Doing Business and its low inflation rate.

The indices per factor were then subjected to Principal Components Analysis. The result of the analysis would yield to the data weights which will eventually be used to compute for the Sovereign Bankruptcy Index (SBI) after considering the business confidence, credit management, resource availability and market stability. Presented below are the data weights and computations of the SBI.

Eigenanalysis of the Covariance Matrix

Eigenvalue	0.20507	0.08228	0.04807	0.00038
Proportion	0.611	0.245	0.143	0.001
Cumulative	0.611	0.856	0.999	1.000

Variable	PC1	PC2	PC3	PC4
BCI	0.621	-0.113	0.237	-0.739
CMI	-0.268	0.499	0.823	-0.037
RAI	0.340	0.849	-0.403	0.026
MSI	0.654	-0.130	0.321	0.672

$$\text{SBI Raw Score} = \frac{.621BCI + -.268CMI + .340RAI + .654MSI}{1.347}$$

Equation 7: SBI Raw Score

$$\text{SBI} = \frac{\text{SBI Raw Score}}{\text{Maximum SBI Raw Score}}$$

Equation 8: Sovereign Bankruptcy Index

It is interesting to note that the factors relating to Market Stability and Business Confidence registered a greater weight in determining which country will least likely go bankrupt. The summary of the SB Index is presented in Table 8. The rankings of the ASEAN nations that would least likely go bankrupt are also displayed.

Table 8: Sovereign Bankruptcy Index (SBI) and their corresponding ranks

ASEAN Country	Business Confidence Index	Credit Management Index	Resource Availability Index	Market Stability Index	Sovereign Bankruptcy Index	Rank
Brunei Darussalam	0.44049	1.00000	0.01855	0.47760	0.23326	7
Cambodia	0.28951	0.62035	0.01755	0.29937	0.15490	9
Indonesia	0.41704	0.67333	1.00000	0.40864	0.49342	4
Lao PDR	0.21748	0.25630	0.01295	0.23116	0.15969	8
Malaysia	0.84562	0.41828	0.36064	0.91095	0.81405	2
Myanmar	0.09855	0.46188	0.06846	0.07986	0.00929	10
Philippines	0.49165	0.50342	0.31332	0.50846	0.43851	6
Singapore	1.00000	0.00673	0.34311	1.00000	1.00000	1
Thailand	0.78641	0.48714	0.44597	0.86934	0.77561	3
Viet Nam	0.51765	0.41748	0.19738	0.59706	0.48002	5

The ranking in Table 8 suggests that Singapore is far from going bankrupt compared to the other ASEAN countries. The confidence that other investors have for the country and its stable market gave Singapore an edge over the other ASEAN member nations. Although Singapore's debt exceeds its GDP causing it to rank the least in the credit management index, the country does not falter in paying its debts. In fact, Singapore's debts are not there to finance its deficit expenditures. These debts are mainly composed of Singapore Government Securities (SGS) issued to support the Central Provident Fund (CPF) which administers Singapore's defined contribution fund (CIA World Factbook, 2014). Thus, Singapore does not borrow to spend. Instead, it invests all its borrowing proceeds that are in turn backed up by assets. The investment income earned on such assets are more than sufficient to cover the costs of all its debts making Singapore a net creditor country instead of being a net debtor country. For the same reason, international credit rating agencies give the Singapore Government the highest short and long-term credit ratings. Hence, external debt is not a cause for Singapore's immediate downfall. Furthermore, in terms of GDP, Singapore does not fall short. The country ranked 4thamong the other ASEAN nations which imply that it stands closely on the average; therefore, its economy is also doing well.

On the other hand, the country which possesses the least rank is Myanmar. Unlike Singapore, investors are not confident in entrusting their resources to the state. It is mainly caused by the country's difficulty in putting up a business and its low investment climate index. Also, its unstable market further contributes to its probability of being bankrupt. The country should look more into its openness to the world market so it could generate more revenue.

The researchers also performed multivariate cluster analysis in order to determine the grouping of countries as quantified by its distance from a prototype. The results of the cluster analysis are displayed in Table 9.

Table 9: Cluster Analysis of Observations

Factors	Cluster 1	Cluster 2	Cluster 3	Grand centroid
BCI	0.342556	0.41704	0.877342	0.510440
CMI	0.543238	0.67333	0.304052	0.484492
RAI	0.104700	1.00000	0.383239	0.277792
MSI	0.365584	0.40864	0.926762	0.538243
SBI	0.245946	0.49342	0.863218	0.455875

The number of cluster observations is 6, 1 and 3, respectively. Cluster 1 is comprised of Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Philippines, and Viet Nam. Cluster 2 is composed solely of Indonesia while Cluster 3 is comprised of Singapore, Malaysia and Thailand. Apparently, Cluster 3 is occupied by the top 3 leading countries in the Sovereign Bankruptcy Index. They are the countries that are less likely to go bankrupt. One may notice that these countries scored more than 50% in the sovereign bankruptcy index in which Singapore claims the top spot. What is a more interesting observation, though, is that Cluster 2 registers the highest in terms of resource availability. It is evident that Indonesia held the top spot in terms of GDP creating a large gap to Thailand which occupies the second spot in the Resource Availability Index. While those countries belonging to Clusters 2 and 3 are a bit safe for sovereign bankruptcy, Cluster 1 goes in the opposite direction. They are the countries that need to assess their financial status in terms of business confidence, credit management, resource availability and market stability in order to cope up with the possibility of going bankrupt. It is also interesting to note that Brunei which was previously competing against Singapore in terms of the indicators as evidenced by Table 1, now belongs to the list of the countries who are in danger of being bankrupt. Its superiority in the Credit Management Index was not enough to put the country in the safe zone as far as bankruptcy is concerned because in all the remaining 3 indices (Business Confidence Index, Resource Availability Index and Market Stability Index) it consistently ranked below the top 5.

4.0 Conclusion

Identifying a country's financial stance is a critical factor in determining its long-term survival. The resources that it owns, the relationships it has established and the obligations that it has to comply spell out a country's financial capacity and when one or all these factors go wrong, sovereign bankruptcy of a country can occur. With the impending integration of the Association of Southeast Asia Nations (ASEAN), each member nation should re-assess its financial stance in order to support itself. Furthermore, to prevent itself from being a burden to the other member countries, it must by all means stop itself from going bankrupt. It is important then that as early as the start of the integration, each member nation should manifest a coherent stability in all their financial matters.

This paper recognizes four salient points that would indicate that a country is less likely to go bankrupt. These are credit management, resource availability, business confidence and market stability.

The first remarkable point is credit

management. Credit management equates to debt. When there is too much debt, bankruptcy eventually follows. Furthermore, if a country does not have an explicit debt management procedure, the greater is its chance of suffering bankruptcy in the end. As such, countries like Singapore, Lao PDR and Viet Nam, which rank low in terms of Credit Management Index (CMI), should look into their debts more seriously. Cecchetti, Mohanty, and Zampoli (2011) viewed that a government debt beyond a threshold of around 85% of its GDP becomes a drag on both welfare and growth of a country. Singapore, having the largest percentage of debt to its GDP (105.5% of GDP) among the ASEAN countries, should act decisively to address this fiscal problem. On the contrary, the presence of debt alone can also be regarded as a low risk especially if a country vividly shows signs of a healthy economy. This is what happened to Singapore. Although it has high debts, it is not listed as part of the ASEAN countries that are more vulnerable to bankruptcy because it has enough resources to finance its debt. Thus, it can be said that sovereign bankruptcy is not only a matter of a country failing to pay its debts.

The second point that indicates sovereign bankruptcy is resource availability. This is measured by a country's GDP. According to Smith (2013), the GDP of a country traditionally measures economic progress. If GDP is rising, the economy is good but if GDP is falling, it is otherwise in trouble. As such, it is obvious that if a country does not have enough resources to mitigate its bubbling debts, it would indeed go down and experience insolvency just like what happened to Greece wherein its economy is considered as one of European Union's weakest links. ASEAN member nations that do not have enough resources just like Lao PDR which ranked least in terms of RAI must then focus its policies on increasing its resources. This can be done through prioritizing investments which is discussed on points 3 and 4 below.

The two last points that indicate sovereign bankruptcy are business confidence and market stability.Both focus on the external and internal factors that relate to a probable business investment of a country. They also have the greatest weights in terms of the overall sovereign bankruptcywhich means that sovereign bankruptcy is more anchored and influenced by a country's ability to entice businesses and investors, and protect its business climate. Singapore, which owns the top spot for the two indices, clearly displays its very stable position in the business world. As evidenced by the recent Global Competitiveness Report for 2014-2015 by the World Economic Forum, Singapore ranked second just a few points behind Switzerland in terms of economic productivity and prosperity.

Recognizing the clustering of the ASEAN member nations in terms of sovereign bankruptcy, one may posit that countries like Singapore, Malaysia and Thailand,which are on top of the overall sovereign bankruptcy index, may be the ones that will aid the other ASEAN countries that are at risk of insolvency. In addition to the top 3 countries, Indonesia with very high resource availability could somehow help the other ASEAN member countries cope up with probable bankruptcy. But what is more alarming is the fact that a ratio of 4:6 in terms of ASEAN countries that are less likely to go bankrupt to those which are more susceptible to bankruptcy is quite of a concern. Unlike the notorious PIIGS (Portugal, Italy, Ireland, Greece and Spain) which only constitute more or less 18% of the total member nations of the European Union, ASEAN countries including

Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Philippines and Viet Nam face a problem that only a few ASEAN countries may help them in case their economies go down.

In order to achieve financial stability and to prevent sovereign bankruptcy, it becomes necessary for the ASEAN countries to evaluate their individual financial capacity. Here lies the proper management of their credit and resources. However, sovereign bankruptcy does not limit to the country's presence of debts. They should look more importantly into the factors about their business relationship with other countries because the business confidence and market stability that result from such relationship opens the country to the trust of the world's investments thereby increasing its chances to compensate efficiently its debts. While some of the ASEAN member states are at risk of probable bankruptcy, it is still essential that cooperation and unity within the countries should be prevalent in order to minimize possible threats and therefore living up to that objective of a harmonious ASEAN integration.

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