RESEARCH ARTICLE

Is a Regional Credit Rating Agency for the ASEAN Feasible?

Tereso S. Tullao, Jr., Christopher James R. Cabuay, Daniel S. Hofileña De La Salle University, Manila, Philippines tereso.tullao@dlsu.edu.ph

Abstract: In the spirit of deepening the bond markets of the ASEAN+3 region, as well as addressing the inadequacies put forth by the underrating of bonds by global credit rating agencies (GCRAs) and their lack of recognition of domestic CRAs' (DCRAs) ratings, we look into the feasibility of a regional CRA (RCRA). Establishing an RCRA is faced with hurdles related to institutional and reputational constraints, mechanisms of information exchange, compatibility of financial reports, operational limitations, governance structure, and regulatory frameworks. In this light, we provide a brief discussion on potential alternatives such as the credit ratings initiative of the National University of Singapore (NUS), mutual recognition agreements, recognition of DCRAs' ratings, removing the sovereign cap, regional GCRA ratings, cooperation between DCRAs and GCRAs, and the harmonization among DCRAs.

Keywords: bond markets, ASEAN+3, credit rating agencies, regional credit rating agency

JEL Classifications: G240, G280

The ASEAN has been envisioned as an integrated region where there are freer flows of goods, services, capital, and skilled workers. However, in terms of capital flows, the net savers in the region are not linked with the investment appetite of the rapidly expanding ASEAN economies. Because this financial intermediation is not fully realized, the excess funds in the region are channelled to Western financial markets. This may be attributed to the underdeveloped bond markets. One particular concern is that ratings issued by domestic credit rating agencies (DCRAs) are not recognized in other countries. In addition, there is a tendency for global CRAs (GCRAs) such as the "Big 3" (Moody's, Fitch, and Standard & Poor's [S&P]) to underrate domestic bonds due to sovereign ratings. In

this light, a proposal has been articulated to establish a regional CRA (RCRA) for the ASEAN, which is autonomous from the DCRAs in each country. This paper will examine the issues on the feasibility of establishing a RCRA in the ASEAN.

Role of CRAs in Capital Market Development

CRAs are an integral component of a financial system that addresses the problem of asymmetric information in the financial market where issuers have more information regarding their probability of default than investors. These CRAs provide information that could assist investors in choosing appropriate financial assets. On the other hand, it facilitates issuers

borrowing funds as credit ratings provide an evaluation of the issuer's financial strength and ability to repay their debt. CRAs gather information on issuers of debt and give accurate and unbiased interpretations on their credit worthiness, which is reflected in their ratings, and in doing so help mitigate the information asymmetry problem (Dacuycuy, 2012).

Credit ratings can also affect market prices. Since investors have access to information about issuers and their issuances, this will most likely influence the interest payment and market value of fixed income securities and structured finance products (Khanzada, 2011). Many investors have relied on CRAs because the ratings they give are considered to be "certification" of good creditworthiness and, hence, investment worthy.

The process of credit rating uses two models: the issuer-pays model and the subscriber-pays model (Castell, 2012). In the issuer-pays model, the issuer or the borrower will pay to have their products rated. The credit rating becomes a marketing tool, or accreditation, that gives the signal to investors that their product is a credit-worthy investment. However, there is a tendency for rating agencies to charge higher fees based on the complexity of the transaction and the type of the instrument. Under the subscriber-pays model, investors pay for the information on issuers and the ratings on their products, enabling them to make better-informed investment decisions.

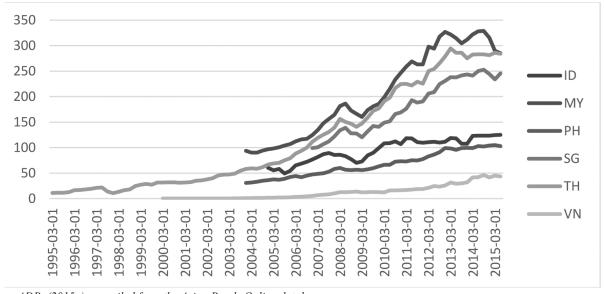
Objectives of the Study

- 1. Identify inadequacies in the ASEAN bond market that rationalize the establishment of an RCRA.
- 2. Enumerate the prerequisites as well as challenges in establishing an RCRA in order to evaluate its feasibility.
- 3. Provide other feasible alternatives to the establishment of an RCRA.

The rest of this study proceeds as follows: section 2 discusses the motivations for establishing an RCRA, section 3 evaluates the feasibility of an RCRA given its prerequisites and challenges, section 4 gives alternatives to the RCRA, and section 5 concludes.

Why Is There a Need to Establish an RCRA?

The rationale for establishing an RCRA can be summarized in three points. First, in the spirit of expanding local currency (LCY) bond markets, there is an utmost need to facilitate cross-border transactions/investments within the ASEAN. The other two rationales are identified issues that need to be addressed: that international CRAs tend to underrate domestic banks and corporations, and that the ratings



Source: ADB, (2015a), compiled from the Asian Bonds Online database.

Figure 1. Total size of Southeast Asian markets (in USD billions).

of DCRAs, though well informed, are not recognized in other countries or by GCRAs.

The promotion of cross-border transactions involving local currency bonds is of utmost concern to facilitate the expansion of the market for the domestic currency bonds within the region. With limited regional cross-border financial transactions, excess funds in the region are channeled to the Western capital markets. These funds are returned to the region to finance the investment needs at higher spread due to the lower ratings made by international CRAs. Such an irony can only be addressed if there are easier intraregional transfers and acceptance of bonds denominated in domestic currencies.

The Asian bond market has grown significantly since 2003 and particularly stronger during the 2008 US financial crisis. The LCY bond markets of East Asia made significant gains for the first half of 2012 (Asian Development Bank [ADB], 2012). Total bonds outstanding rose 1.9% quarter on quarter and 8.6% year on year from USD 5.525 trillion in 2011 to USD 5.93 trillion (34.4% of which comes from corporate bonds and 65.7% comes from government bonds) as of the second quarter of 2012.

As may be seen in Figure 1, the total size of LCY bond markets in Southeast Asian markets (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam) decreased from USD 1.11 trillion as of the end of 2014 to USD 1.086 trillion as of the second quarter of 2015. The share of government bonds in Southeast Asia grew to nearly 70% of the total bond market. However, this still pales in comparison to Japan's USD 8.9 trillion and China's USD 5.6 trillion (ADB, 2015a). As of the end of the third quarter of 2015, emerging East Asia's LCY reached USD 8.78 trillion, with China as the largest market. (ADB, 2015b)

However, despite this growth, cross-border investments within the ASEAN remained very little. While ASEAN economies are being integrated through trade and the supply chain of many products, the same cannot be said for the capital market. In 2010, cross-border debt investment only amounted to 7.2% of the total, which is not enough to fully realize the benefits of harmonized bond markets (Wright, 2012).

Inadequacies in the ASEAN Financial Markets

International credit ratings agencies tend to underrate bonds issued by domestic banks and

corporations because of caps on sovereign bond ratings. The true creditworthiness of these institutions tends to be understated. These underratings can make the domestic currency bonds very expensive because of higher interest rates. This does not facilitate the development of a cross-border in bonds denominated in domestic currencies.

Lee Kok Kwan of the Commercial International Merchant Bankers (CIMB) asserts that the sovereign ratings do not reflect real underlying credit fundamentals and the probability of default. It creates a bottleneck for cross-border investment because it serves as a cap for corporate and bank ratings (Wright, 2012).

He raised this issue by giving an example in the region. Thailand, which has a small foreign currency debt, a significant amount of foreign exchange reserves (around USD 169 million), and a notable self-sufficiency that prevents foreign money from purchasing their reserves, has a much lower rating than France, Italy, or Spain. In particular, the Bangkok Bank, which has lower leverage and a good amount of customer deposits, is rated lower than the higher-leveraged French, Italian, and Spanish banks. James Fielder of the Hong Kong and Shanghai Banking Corporation (HSBC) supports this by saying that local ratings are not recognized.

Domestic credit ratings are quite adequate in evaluating the credit worthiness of domestic banks and corporations, but these ratings are not recognized outside the domicile of the issuer. In many institutional investors, pension funds managers usually require an international credit for the bonds to be purchased. Because of this, the ratings made by DCRAs are not recognized by these institutional and large-scale buyers of bonds even if the ratings made by these DCRAs are adequate given their knowledge of the market and other risks pertaining to the domestic issuer of bonds. Despite the knowledge of DCRAs regarding the local markets and the adequacy of their ratings, they are not recognized globally by large-scale and institutional investors.

Challenges in Establishing an ASEAN RCRA

In their study, Parrenas and Waller (2005) list challenges that make the harmonization of standards among DCRAs in the region difficult. There are heterogeneities across countries regarding the stage of

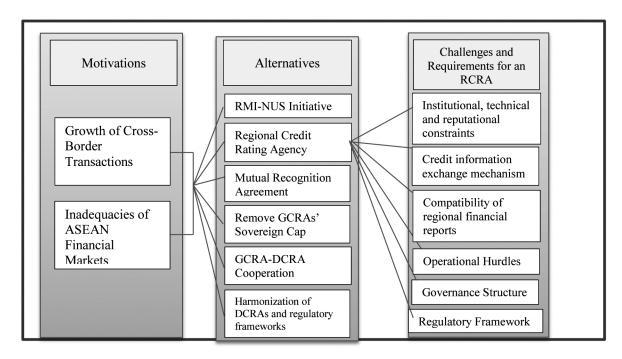


Figure 2. Framework for regional initiatives in deepening the ASEAN+3 bond markets.

market development, accounting standards, regulatory frameworks, and the stage of maturity of DCRAs. There are also a number of DCRAs that have affiliated themselves with GCRAs to adopt their practices and methodologies. A study by the World Bank, written by Ghosh (2006), serves as the primary literature for discussing the challenges and issues that need to be addressed in order to form an RCRA.

Figure 2 summarizes the framework for the discussion in this paper regarding the feasibility of establishing an RCRA as well as other alternatives to deepen the bond markets of the region. Initially, what motivates the creation of an RCRA is the interest in facilitating further cross-border transactions in order to deepen the bond markets in the ASEAN+3 region, as well as to address the inadequacies brought about by GCRAs' sovereign cap and their lack of recognition for DCRAs. In this study, we explore the challenges that determine the feasibility of establishing an RCRA, but at the same time, we look at other potentially desirable alternatives to an RCRA.

This study highlights the following six challenges in the establishment of an RCRA:

1. Existence of significant institutional, technical, and reputational constraints

The independence and credibility of an RCRA is a must for it to perform its role in the development of the bond markets and at the same time have enough clients to maintain its viability (Parrenas & Waller, 2005). As seen in a viability study on RCRA commissioned by the World Bank and undertaken by CRISIL (Ghosh, 2006), the profitability and the success of the venture would require the following: adequate business size and high capital levels, high-quality governance, staff and adequate expertise, support of respective governments in the region, buy-in from international and domestic rating agencies in the region, and independence from political pressures.

2. A mechanism that will allow exchange of credit information

The availability of reliable and adequate information is likewise critical in the success of any CRA given the problems of asymmetric information in the financial sector. In order to achieve this objective, the OECD principles of good governance suggest that all firms must disclose all information on their financial and operating results, objectives, major share ownership and voting

rights, remuneration policy for board members and executives, board member information, transactions with related parties, risk factors, issues regarding employees and other stakeholders, and governance structures (Ghosh, 2006).

The study of the World Bank identifies the key elements for a well-functioning credit information system (Ghosh, 2006). The primary element is a clear legal and regulatory framework that can be established with the promotion of credit bureaus though laws that ease the sharing of credit information. Governments may need to impose laws on bank secrecy regulations, data protection, and consumer protection. The issues of privacy and access should also be addressed (Ghosh, 2006).

In addition, the issue of the quality of information will depend largely on the disclosure behavior of the issuer. Since the information disclosure is not mandated, they may not disclose relevant information that may affect not only their profitability but also their probability of default beyond what is asked by the rating agencies. In addition, even if there is a legal mandate for information disclosure, the CRAs may not be able to capture the incidence of unethical behavior, fraud, and other agency problems since disclosure comes from the issuer.

3. Quality and comparability of financial reports

Along with the exchange of credit information, the quality of financial information available to creditors and stakeholders depends on the quality and the standards of financial reporting/accounting, as well as enforcement mechanisms (Ghosh, 2006). Unfortunately, the ASEAN+3 economies follow different accounting standards. Korea follows the Korean Financial Accounting Standards (KFAS); the Philippines follows the International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS); Indonesia follows the Indonesian Financial Accounting Standards (PSAK), which is converging with the IFRS; and China follows the Chinese Accounting Standards (CAS; Ghosh, 2006). Examples of differences in financial reporting are listed in Table 1. These practices are in the process of but are still ways off from converging with the international standard.

Ghosh (2006) identifies three main links in the enforcement of financial reporting standards: those that prepare financial statements, auditors, and regulators. These agents must be competent and must adhere to professional standards to ensure the integrity of their services. Managers need to enforce compliance, and those that prepare financial statements must comply with the applicable accounting standard. Regulators must have the legal authority and capacity to monitor the financial reporting and auditing practices of companies (Ghosh, 2006).

Although a number of economies in the region have adopted the International Accounting Standards for compliance purposes, the proper implementation of these standards may vary across countries in the region. In addition, the relevant information that may detect probability of default may not be disclosed by the issuer since this may affect their ratings. As mentioned earlier, the methodologies used by CRAs may be inadequate in capturing fraud and unethical behavior even if they utilize sophisticated methodologies and huge database.

4. Operational hurdles and viability issues

Similar to the earlier discussion on the requirements needed to surpass institutional, technical and reputational hurdles, it is necessary to address issues on ownership, capitalization, legal personality, management, and control, in order to ensure the success of an RCRA. As an overarching factor, good governance and shareholder structure are necessary to ensure full credibility of DCRAs (Ghosh, 2006).

In the study of Ghosh (2006), the results of a feasibility study on setting up an RCRA revealed that the RCRA would be able to profit in its fourth year with at least USD 15–40 million worth of capital given that it has 10% market share. The rate of return was approximately 20.7%. This therefore implies that the RCRA should be adequately capitalized.

As regards the ownership of the RCRA, it is strongly suggested that it is owned privately by all member countries wherein shareholders should be seen as credible and should foster the independence of operations (Ghosh, 2006). Shareholding must

Table 1. Examples of Differences in Accounting Standards in ASEAN+3

KFAS	There are several differences when it comes to consolidated total assets and revenue. The Korean Generally Accepted Accounting Principles (GAAP) adjust the book values of held-to-maturity securities to a recoverable amount, and records decline in book value as impairment losses in current loss, whereas US GAAP writes these off as a charge to income. Korean GAAP revalued fixed assets upward in 1998 and 2007, which resulted in a gain in stockholders' equity, and depreciation expenses were determined on a newcost basis whereas US GAAP does not permit revaluation and uses historical cost for depreciation.
PSAK	Many requirements in the IFRS and IAS have not been absorbed by PSAK. For disclosure for financial instruments, IFRS requires more disclosure with regard to derecognized and underrecognized transferred financial assets. The IFRS principle for financial instruments (IFRS 9) is not yet implemented by PSAK and includes guidance on classifying and measuring financial assets and liabilities as well as derecognition.
CAS	CAS is more likened to IFRS but is quite different from US GAAP. Differences lie in the presentation of basic financial statements, consolidation, measurements of various items such as fixed assets, intangible assets, leases, inventories, benefits, liabilities, and disclosures. CAS and US GAAP use historical costs of assets in their valuations wherein revaluation is not allowed in China but is permissible in US GAAP under business combination. IFRS allows for revaluation based on historical cost or fair value but must be done regularly.

Source: For KAS, KB Financial Group, Inc. (2009); for PSAK, KAP Tanudiredja, Wibisana & Rekan (2013); for CAS, Dezan Shira & Associates (2013).

be dispersed, and the maximum that may be held by a single entity should be limited to 5%–10%. However, a shareholder may possess more if it is a multilateral agency. Most importantly, it is imperative that the regional representation within the board should be balanced for all countries. The management should strive for the RCRA to meet international standards in accounting as well as ratings practices in order to be recognized internationally and should encourage its members to follow common standards and practices when it comes to the preparation of financial information.

5. Governance structure

RAM Consultancy (2000) identifies two trends that may emerge should DCRAs tie up with GCRAS: GCRAs fully owning the DCRAs or the tie up remaining only at the technical assistance stage. Should the first scenario occur, a global rating standard as well as an instant technology transfer may emerge. Should the latter scenario occur, DCRAs may adopt the policies and standards of the GCRAs, but policies will still remain at the discretion of the DCRAs.

This may lead to monopolization should GCRAs fully own the DCRAs or perhaps an oligopolistic setup since there are three significant GCRAs (namely, S&P, Moody's, and Fitch). But in the case of an RCRA, given the provisions on ownership specified previously, it will not be a monopoly but more of a shareholder type of management. It may overlap the functions of DCRAs, but it will be sure to be able to govern them and give them common standards and methodologies.

6. Regulatory framework

A regulatory framework is important in addressing the issues of independence, conflict of interest, quality and integrity of the credit rating, and transparency that are usually hurled at CRAs in the conduct of their business. Most DCRAs are under the supervision of regulatory agencies of government within their territories. However, with the establishment of an RCRA, the identification of a regulatory agency in the region becomes problematic given that there is no supranational authority in the region (ASEAN is just an agreement) to establish this regional regulatory body.

On the other hand, if an RCRA will be subject to the rules and conditions of all national regulatory agencies in the region, it may be difficult to bring this RCRA into fruition given the variability of the regulatory requirements by various governments in the region. If, however, there is harmonization among regulatory frameworks and requirements among economies under the auspices of a regional association or initiative, the RCRA may comply with the harmonized regulations. Although this option may be feasible, this does not, however, answer the question of the legal supervision of an RCRA.

Alternatives to an RCRA

Given the issues and strict requirements discussed above, establishing an RCRA in ASEAN proves to be more difficult and tends to be infeasible at the moment. Fortunately, there are other alternatives that could take the place of an RCRA in the meantime and help set the preconditions for its establishment.

Credit Ratings Initiative of the Risk Management Institute of NUS

The credibility of CRAs had diminished since the 2008 US financial crisis due to the lack of transparency, doubtful processes in evaluating credit risk, lack of accountability, and issues of conflicts of interest (Duan & Van Laere, 2012). In their study, Duan and Van Laere (2012) highlight that credit ratings possess the characteristics of a *public good* (that is noncongestibility and nonexcludability).

Credit ratings are needed in financial markets by buyers and sellers of funds. Investors subscribe to credit ratings to gauge which among various debt instruments are worth "buying" or investing in. Issuers, on the other hand, are willing to pay for a credit rating as it helps them "market" and eventually "sell" their debt instruments. Therefore, the methodologies need to be transparent, independent and free from conflicts of interest, and reliable when it comes to the assessment of the creditworthiness of issuer (Duan & Van Laere, 2012). The current business model being used by GCRA, which is the issuer-pays model, may threaten the independence of the GCRA and may have conflict-of-interest issues. Since the issuer pays and GCRAs

offer other services to the issuer, this may lead to a moral hazard as well as unnecessary rating shopping.

Duan and Van Laere (2012) highlight the approach of the RMI that is focused on the provision of credit ratings as a public good. The RMI developed a credit research initiative (CRI) in 2006, which basically aims to develop a *database similar to Wikipedia* including listed and delisted firms globally. It would not use a grading mechanism as S&P, Fitch, or Moody's (from AAA to D), but instead, using various default models, it gives a *numerical probability estimate of a company's default*. This may serve as a direct substitute to the use of credit ratings.

This system depends on two very important elements: the database of firms, and an advanced IT system and a pool of experts in developing default prediction models. The information for the database will come from research databases such as Bloomberg and Reuters, and as of the release of the RMI rating system in 2010, there were about 17,000 listed firms. The human resources will be comprised of teams of researchers invited to "compete" to get their models adopted for the RMI ratings. It will then run parallel implementations for the various rating models while preserving the intellectual property of the researchers because it is nonprofit. This runs independently from any government committee, and the regulation on this system will come purely from the global community. This will eliminate any conflict of interest since it is nonprofit.

Currently, the system makes use of Duan, Sun, and Wang's (2012) forward default intensity model. It is a reduced-form model wherein the probability of default is computed as a function of different input variables. The time series dynamics of limitless input variables is not needed, and horizon forecasts can be computed by knowing the value of input parameters at the time of prediction. This model allows the generation of default forecasts from one month up to two years. It may also be aggregated, to allow assessment at the portfolio and economy level. There are difficulties arising, however, in defining and classifying default events across countries and regions especially since they have different definitions of default.

Mutual Recognition Agreement

Instead of establishing an RCRA for the ASEAN, countries may opt to engage in a mutual recognition

agreement (MRA) within the region to accept ratings done by DCRAs. In an earlier study of RAM (2000) for the ABA, they identified establishing a regional caucus/coalition of Asian CRAs to achieve convergence of rating standards. They emphasize that in order for this option to work, let alone be feasible, the majority of Asian CRAs must support this regional initiative.

In the same light as this regional caucus, an MRA may be formed among ASEAN CRAs, and the cooperative council to lead them will be the Association of Credit Rating Agencies in Asia (ACRAA). As the recognizing regional body, the ACRAA may require all financial instruments within the region to be rated by DCRAs that are accredited or have an MRA with them. The ACRAA will need to spearhead several stratagems to promote convergence as identified previously by RAM (2000):

- Identification of common standards for practices of all CRAs. Short-, medium-, and long-term targets ranging from simple minimum requirements to changes in procedures and philosophy.
- Establishment of a strategic plan involving the common standards and practice, and consensus of member CRAs to comply. Certain key issues need to be addressed: should the common standards be according to best practice or majority? How is best practice determined given that practices are subjective? How will differences in bond market development, regulatory environment and market infrastructure affect the setting of standards? How will compliance be insured?
- Draw up co-operative programmes to encourage harmonization and cooperation among member CRAs.
- Publish such standards for transparency and as a form of self-regulatory tool.

RAM (2000) identifies several advantages for this relative to its disadvantages. Developing an MRA is an evolving process rather than an immediate imposition. It is a democratic option since the process of setting best practice standards involves the participation of member CRAs, getting their practices, and allowing them to decide for themselves how much convergence is possible. This improves their credibility and

will eventually promote cross-border investments, transparency and objectivity of CRA ratings, and closer economic cooperation. On the other hand, this option is time consuming and highly dependent on the cooperation of the ASEAN CRAs. Given that they participate in the MRA, if there is no incentive to comply or no penalty for noncompliance, CRA commitment may fluctuate. Furthermore, differences in the level of development may hinder this process. Most importantly, there is a need to define the capabilities of ACRAA since it will play a central role in establishing convergence in ratings procedures and standards and will also assume the role of the compliance officer (RAM, 2000).

International Recognition of DCRAs' Ratings

Parrenas (n.d.) highlights that although there should be limited regulation on the operations of CRAs, governments and international organizations play in promoting a favorable environment for CRAs. They can promote high standards of practices through an accreditation process. This allows regulators some scrutiny of rating agency standards (Parrenas, n.d.).

An alternative or perhaps a potential variation of an MRA would be to establish a supranational or international entity that will accredit the ratings done by DCRAs, and this accreditation will serve as the signal for global markets that the region's ratings have been evaluated using internationally acceptable practices and standards.

An example of this is the Nationally Recognized Statistical Rating Organization (NRSRO) designation given by the US Securities and Exchange Commission (US SEC). In order for an institution to be given the NRSRO status, the US SEC evaluates the institutions' activities in rating structured finance products such as subprime residential mortgage-backed securities and related debt obligations (US SEC, 2008). They look at the NRSRO's ratings policies, procedures and practices, reviews of ratings models, assumptions, criteria and protocols, adequacy of disclosed ratings process and methodologies, compliance with ratings policies and procedures, and the efficacy and influence of conflict of interest procedures (US SEC, 2008).

A study on Asian CRAs by RAM Consultancy Services Sdn Bhd (2000) for the Asian Bankers Association proposed a set of criteria for regional accreditation deemed to be comparable to global standards. The following has been listed in Parrenas (n.d.):

- Structure, size, and quality of organization.
 The organization's capability of a thorough and competent evaluation of an issuer's credit.
 Determines the quality of personnel. Based on the experience and qualifications of the personnel.
- Financial resources and independence. Determines the independence of the CRA from financial and political pressure. Based on the financial resources of the CRA.
- Systematic rating procedures. Evaluates the rating procedures. Based on the flexibility of the company to changes in its key personnel pool.
- Internal compliance procedures. This determines the trustworthiness of the CRA. Evaluates compliance to internal procedures that prevent the misuse of nonpublic information.
- Rating scales that are comparable with other GCRAs. Rating comparability is essential to encourage cross-border flows and avoid market confusion.
- Public disclosure of rating methodology and rationale. Determines the transparency of CRAs' rating process. Full disclosure of methodology and rationale is essential.
- Full disclosure on any possible conflict of interest. There should be public disclosure if a senior management personnel of the CRA is a significant stakeholder of a client.
- A proven track record via default studies.
 Determines the credibility of the CRA in
 publishing default studies. DCRAs should
 aim for default rates that are comparable with
 GCRAs
- Independence from political pressures and ownership pressure. CRA management should not have pressures from its owners who may have vested interests. This is based on the number of shareholders, and it should be that there is no dominant shareholder.

Building on this regional accrediting body will increase credibility for DCRAs, encourage them to improve internal procedures and continuous maintenance of standards, and allow easy public recognition (RAM, 2000). However, the contribution

to harmonization will be limited especially if key issues such as the accrediting body and the criteria used will not be resolved or determined properly (RAM, 2000).

Although international recognition of DCRAs is desirable, this route may take some time since there is a need for a minimum volume of business and resources (including databases, financial resources, and human resources) for DCRA to be at par with the reputation acquired by GCRA over the years.

Removing the Sovereign Cap Set by GCRAs

A rather extreme solution in responding to the inadequacies in the capital market is the removal of the sovereign cap, which limits the ratings of local currency instruments.

Sovereign ratings are basically assessments of a borrower's probability of default or their ability to service their debt on bonds and debt securities issued by national governments that are usually denominated in a foreign currency. The tendency is that countries with unstable economies issue bonds denominated in currencies of countries with stable economies. Sovereign ratings are country-specific and usually act as a "cap" or a "ceiling" for the ratings of entities within the sovereignty. CRAs rarely give ratings to local government levels and private companies that are higher than that of the country's sovereign rating (Cantor & Packer, 1996), because CRAs perceive that the performance of institutions within a particular sovereignty is largely dependent on the country's economic performance.

The "Big 3" (S&P, Moody's, and Fitch Ratings) have different views on the sovereign cap. Fitch Ratings views sovereign ratings as "Country Ceilings" reflecting the risk of capital and exchange controls imposed by sovereign authorities that may impede the capacity of the private sector to convert local currency to foreign currency and transfer to nonresident creditors (Fitch Ratings, 2012). Their national rating scale ranks the degree of perceived risk relative to the lowest default risk in the country and is not at all related to the national ratings of other countries. Moody's on the other hand distinguishes their sovereign ratings into two: government bond ratings aimed at measuring a government's risk of default in local and foreign currency and ceilings and guidelines aimed at assessing possible government interference on the capability of agents to repay debt (Moody's Investor Service,

2006). The country ceiling indicates the highest rating that may be assigned to the foreign-currency issuer rating of an entity within the sovereignty of a country. The lower the ceiling, the larger the gap between a company's local currency rating and its foreigncurrency issuer rating, whereas the higher the ceiling, the lower the potential of governments to influence private-sector foreign-currency ratings (Moody's Investor Service, 2006). The ceiling depends on the probability a government would use debt moratorium should it default. S&P, on the other hand, does not view sovereign ratings as "ceilings" although they assess the impact of sovereign-related risks in assessing entities within the sovereignty (S&P, 2011). S&P's sovereign rating looks at both the political and economic profile of the country, as well as its flexibility and performance profile by looking at a country's external relations, fiscal, and monetary status (S&P, 2012a).

Regardless of their methodologies in producing sovereign ratings, CRAs usually look at economic, political, external, fiscal, monetary, and financial factors to give judgment. Mellios and Paget-Blanc (2005) and Cantor and Packer (1996) find that factors that directly affect a country's ability and willingness to service its debt (or its probability of default) are what influence sovereign ratings the most. Such variables include among others per capita income, GDP growth, inflation rate, fiscal balance, external balance, external debt, economic development, default history, and political stability.

In order to promote cross-border transactions within the ASEAN and expand the market for domestic currency bonds within the region, it may be advisable to remove the sovereign cap. There are many high-performing bonds in the region, but they tend to be underrated by GCRAs because of the sovereign cap. As mentioned in Wright (2012), Lee Kok Kwan of CIMB points out that the international rating system is problematic because of the sovereign cap since "it doesn't reflect real underlying credit fundamentals and the probability of default." This is because sovereign ratings cap corporate and bank ratings.

Furthermore, the criteria being used by the Big 3 GCRAs may be adequate, but DCRAs tend to have a better view of the domestic landscape and hence more adequate knowledge of the market. Unfortunately, DCRAs are not recognized by institutional and large-scale buyers because they are not accredited by GCRAs.

Special Ratings for the Region by GCRAs

Another alternative that is already being implemented by S&P for several countries is the issuance of credit ratings that are exclusive to certain regions. S&P had already implemented an ASEAN credit rating scale that is applicable only to ASEAN countries.

The ASEAN market has had a growing need for capital markets to meet demands for funding. Foreign issuers have increasingly been active in select ASEAN markets due to the good liquidity and attractive needs, and holdings of local currency bonds by global investors have increased due to higher bond yields, currency appreciation, and strong growth prospects (Kathpalia, 2011). According to Kathpalia (2011), S&P's development of the ASEAN Regional Credit Rating Scale was instigated by ASEAN's gross national savings (which approximate 30% of GDP and exceeds domestic investments by 10% of GDP). Furthermore, the credit–deposit ratio in ASEAN banks is relatively low (76% vs. 90% in Europe). Further motivation stems from S&P's desire to deepen the partnerships with its ASEAN affiliates; build capabilities for infrastructure finance; provide issuers, investors, and regulators better appreciation of relevant risk factors; and build on the strong progress of the ASEAN scale rollout (Kathpalia, 2011).

The S&P ASEAN Regional Credit Rating Scale provides a reflection of the relative creditworthiness of the ASEAN. Developed from a bottom-up approach, that is, getting common practices on the national level and applying them to the regional level, issuers now have the option of getting rated on the regional scale (Kathpalia, 2011). In S&P's definitions of ratings, the ASEAN Credit Rating Scale is noted by the prefix "ax" (e.g., axBBB-). This, in a way, serves the function of an RCRA as it complements the global rating scale, giving a more accurate credit risk differentiation within the region.

Issuers now have access to a larger group of investors at a potentially lower cost of funding. It offers them greater flexibility with being able to choose the market and currency to issue. Investors now have finer distinctions of credit quality, greater access, and comparability of issuers in the region to help facilitate their investment decisions.

Kathpalia (2011) identifies the potential impacts of the rating scale as potentially leading to the creation of an ASEAN fixed income asset class as global investors could now follow the ASEAN scale ratings in addition to the global and national scale ratings. It is highly possible for large institutional investors to develop an ASEAN bonds portfolio and could eventually promote pan-ASEAN investments and help pave the way for ASEAN integration.

Cooperation Between DCRAs and GCRAs

DCRAs are essential to the growth of the bond markets because they have a very good understanding of local companies and better access to local information than GCRAs. Despite this edge, DCRAs need to improve on their timeliness, independence, transparency, accuracy, and quality of their analysis for them to be attractive partners of GCRAs (Parrenas, n.d.). The entry of GCRAs into the local markets may increase market competition with existing DCRAs. The entry of GCRAs may also promote improvements in rating practices among DCRAs, which can contribute to the growth in the domestic bond markets and ultimately facilitate cross-border transactions (Parrenas, n.d.).

However, the RAM Consultancy (2000) cites the possibility of technical and equity joint ventures with GCRAs to facilitate the harmonization and improvement of rating standards. RAM (2000) identifies two trends that may emerge when DCRAs tie up with GCRAs. First, GCRAs may end up owning majority or all of the DCRAs. The GCRA will then assume control of management and all rating practices and policies. The DCRA's rating standards will then converge with the GCRA and will then eliminate the incentive for a regional common standard. The second trend may take the form of a tie-up that will remain at the technical assistance stage with GCRAs having a relatively minor equity stake. The DCRA may adopt the standards of its partner, but practices and policies still remain at the discretion of the DCRA.

On the one hand, if DCRAs will be fully owned by the GCRA, a global rating standard may emerge, converging all local standards into just one standard, causing very little strain/pressure on DCRAs. It will be an instant technology transfer and will give DCRAs some credibility (RAM, 2000). On the other hand, should DCRAs be fully dependent on their partners, local expertise will not be developed. DCRAs still have better insights on the local business setting as well as the socioeconomic landscape. GCRAs still tend to

downplay "local components" because these tend to be subjective relative to the locality.

Harmonization Among DCRAs

As mentioned above, an MRA will help achieve convergence in ratings practices and standards among ASEAN CRAs especially with ACRAA leading the way. In line with this, ACRAA has already begun its promotion of the harmonization of rules, procedures, methodologies, and code of ethics among DCRAs. This step is essential to the formation of an MRA as well as the eventual emergence of an RCRA.

Harmonization in CRAs basically means that DCRAs will either adapt international best practices or be regulated by a governing body in the process of rating each company. It also means that CRAs will agree to a common acceptance of and use of methodologies in establishing ratings. Harmonization in CRAs will establish comparability among the ratings given by DCRAs since their rating processes are in sync with one another and will increase the flow of information among the ASEAN+3 CRAs (Dumlao, 2011). This in turn will lead better interpretation and comparability of financial data by lenders and investors among countries and in effect will increase cross-border investments and primary issuance flow (Dumlao, 2011). Without harmonization or the setting of standards, there is a possibility that the ratings of one agency may differ from the ratings of the other since the criteria used may be different. "Harmonization will supply a reliable and credible system of a region wide credit risk measurement" (Dumlao, 2011). Among the advantages of harmonization are

- Comparability—When CRAs follow a minimum rating process and these methodologies and practices are applied consistently through different firms, it will be easier for investors, lenders, and credit users to compare a firm in one country to a firm in another (Dumlao, 2011).
- Encourage competition (external pressure)—
 Opening channels for interaction of CRAs in
 the ASEAN region will promote competition
 among the CRAs. Competition will encourage
 the improvement of performances of the
 CRAs and will improve their efficiency. Also,
 this will allow comparisons among different

CRAs in terms of service, transparency and accountability (Dumlao, 2011).

 Peer pressure (external pressure)—Through organizations such as ACRAA, peer pressure becomes a factor in pushing compliance as the goals of such organizations move towards the adoption of best practices and compliance to International Organization of Security Commissions (IOSCO) rules.

IOSCO (2011) identified a set of guiding principles for CRAs to improve their operations and facilitate harmonization. Following these guidelines should be the standard to ensure the accuracy and transparency of their ratings. First, IOSCO (2011) encourages CRAs to be independent in their rating decisions, that is, being free from political pressures and conflicts of interest that may confound the quality of ratings. Such pressures and conflicts may arise from the CRA's ownership structure, business, and financial activities and those of its employees. Second, IOSCO (2011) encourages CRAs to have quality and integrity in the rating process implying that ratings should reduce information asymmetry among issuers, investors, and other market players. Lastly, IOSCO (2011) encourages the transparency and timeliness of disclosure and at the same time the preservation of the confidentiality of nonpublic information. The same transparency is also needed in disclosing the methodology for generating ratings.

The computation of default rates differs among CRAs. In fact, Dumlao (2001) stated that even if the definition of default rates has been published, most of the time the implementation is different. This may lead to some misleading inferences when comparing the ratings of CRAs. In fact, ACRAA identified at least two main philosophies in determining the default rates—the "probability of default (PD)" & "loss severity."

The differing definitions of default may lead to inconsistencies and differences in the methodology of CRA rating; therefore, it is important to standardize the definition of default and its computation and usage to allow comparability among the CRAs.

The ADB handbook (2008) provides the methods in international best practices in credit rating and recommends steps and necessary prerequisites in its adoption. Compliance to this code will improve the comparability of DCRAs to GCRAs and will help global investors understand these ratings better. The

handbook is divided into two categories, mainly, "essential best practices," which are the present the minimum standards expected by global investors, and "desirable best practices" that will help improve credibility and reliability of DCRAs in preparation for their entrance to the global market.

Credibility in the local domain of the CRA is also an important factor in establishing its credibility in the international playing field. For the ratings to be viewed as credible, it must be free from any influence from economic, political, or business interests as well as the skill level of the staff that are to form the rating committee. In line with that, IOSCO (2011) has stated certain control measures that are currently being implemented by some CRAs regarding the competency and credibility of the CRA's staff, analysts, and directors including compensation-setting structures, outside employment, analyst selection, trading/owning securities and investments, the firm's compliance culture, reporting questionable behavior, and gifts.

Harmonization of Regulatory Frameworks

To establish an integrated bond market, rules and regulations between different countries must first be harmonized. There are two basic approaches to establish harmonization: the first, the top-down approach, means that a single regulatory body will impose controls that all countries must follow. The second is the bottom-up approach, which aims to harmonize each country one by one (ADB, 2010).

The top-down approach is a process from which rules are set from above and are applied downward to each country. An example of this top-down approach is the case of the Eurobond market, which is placed under the International Capital Market Association.

A proposal for a top-down approach in the ASEAN bond market focuses on the inter-regional offshore private placement of the corporate bond market for professional market players. Since ASEAN countries do not have a single regulatory body, the only possible way to establish harmonization using the top-down approach is through the establishment of offshore bond markets (ADB, 2010). Through this offshore integration approach of corporate bonds, the harmonization of different regulations and rules of countries are not required (ADB, 2010). This integration will not include government issued bonds since these debt instruments will be issued in

accordance to the country's policies and goals and are usually subject to strict regulation by the central bank and finance ministers (ADB, 2010). This framework merely suggests that countries should first develop and refine their domestic bond markets before opening it to foreigner investors and encouraging cross-border transactions. After which, it was recommended to establish either an on-shore integrated market or an off-shore integrated regional market.

Another option is that countries will establish onshore bond markets, but this will present difficulties as outlined by Jang and Hyun (2009): First, it is noteworthy to mention that the political difficulty in establishing on-shore integration is very high since this will require that governments harmonize national rules and regulations. Furthermore, regulations may be difficult to enforce since some ASEAN bond markets are more developed that others. Also, some local bond markets are not yet fully prepared to open their operations to foreign investors (ADB, 2010).

It is important to develop regional harmonization of CRAs to reduce reliance on GCRAs since the value of such ratings may only be limited to domestic investors. Also, domestic ratings are quite different from global CRAs since these usually do not account for foreign currency exchange and are not limited by the sovereign caps. Therefore, there are notable differences in the ratings of DCRAs and GCRAs; this may hinder cross-border investment. A development of a consistent rating process across the region will encourage expansion of the institutional investor and promote reliability of financial data as well as comparability of accounting standards among ASEAN nations (Parrenas, 2004).

Another top-down approach is the reduced reliance on CRA ratings presented by the Financial Stability Board (FSB). The FSB proposed principles to help reduce reliance from ratings made by CRA for it found out that it will reduce the risk of financial instability. The reduction of herding and cliff effects that arise from the thresholds of CRAs being in tandem laws, regulations, and market practices (FSB, 2010). The ultimate purpose of these suggestions is to end the reliance of corporations on the ratings of CRAs and instead beef up and encourage internal credit risk assessment practices.

If the option to reduce reliance on external credit rating is pursued, can the individual issuer have the capacity to make an objective analysis of its credit worthiness? Do they have the resources, both databases and human resources, to undertake an objective risk assessment and undertake this very costly undertaking? In addition, individual companies may not have the economies of scale enjoyed by the GCRA, their database, and cadres of analysts and professionals doing credit rating analysis to make credible risk assessment that may threaten the quality of the risk analysis.

As for the bottom-up approach, examples include the ASEAN Capital Markets Forum (ACMF), a body that is starting to build the ASEAN and Plus Standards. A bottom-up approach includes actions that will harmonize regional regulations and rules one by one and step by step. Partial and gradual harmonization can be achieved through the adoption of common practices and mutual recognition of CRAs (ADB, 2010). Furthermore, the process of harmonization must be gradual since there are substantial differences between the regulatory and legal bodies of each country (ADB, 2010). Common practices may include the principles set by IOSCO, the ACMF, and the ASEAN and Plus Standards.

The ACMF is composed of 10 capital market regulators from 10 ASEAN jurisdictions: Brunei Darussalam, Cambodia, Indonesia, Laos PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. The purpose of the ACMF's main focus is to promote harmonization of regulations and, ultimately, the integration of regional capital markets.

A scheme developed by ACMF is called the ASEAN and Plus Standards. This is in order to manage cross-border transactions such as the offering of securities within the ASEAN region. The aim of the ASEAN and Plus Standards is to increase the overall attractiveness of ASEAN bond markets through the promotion of proper disclosure standards of corporations. The ASEAN standards are based on the principles of IOSCO and the standards set by the International Financial Reporting Standards (IFRS) and the International Standards on Auditing. The Plus standards on the other hand, added more standards that are required by some ASEAN countries in their laws and regulations.

Because of difficulties in monitoring and problems of comparability, the harmonization of regulations should not only be based on principles-based criteria. The harmonization should likewise be based on

concrete, specific, and measurable metrics so that these metrics can be comparable.

Conclusion

The proposed establishment of an RCRA in Asia is premised on addressing the inadequacies of the current DCRAs in exploiting its potential contributions in the development of the bond market in the region. As envisioned, a developed bond market will ultimately enhance greater cross-border transactions and ultimately contribute in strengthening the goals of the integration of the ASEAN+3 region.

The proposed RCRA, however well-intentioned, is confronted with difficult challenges including major institutional, technical, and reputational constraints; inadequate mechanisms in the exchange of credit information; variability of standards used in financial reporting; thinness of the market for the viability of the enterprise; and the question on governance structure as well the regulatory framework that will oversee the regional entity. The intensity of these difficulties is making the proposed establishment of a RCRA in Asia almost an impossible dream.

Despite these limitations on the practicability of establishing a RCRA, there are however, several avenues that may be pursued sans some of the constraints. The option of establishing a mutual recognition agreement (MRA) among regulatory agencies has some prospects. To wit, regulatory bodies that supervise DCRAs may establish bilateral or multilateral agreements recognizing the DCRAs in other jurisdictions. Although this option may tackle the questions on regulatory framework and governance structure, it may not, however, address the reputational, technical, and institutional constraints of DCRAs as well as the inadequate mechanisms for sharing comparable financial information for risk analysis.

Given the limitations of an MRA option, what may be pursued is the route of accreditation of DCRAs in various jurisdictions given by a regional accrediting body. This may require that regional bodies like the ACRAA and ASEAN Bond Marker Forum (ABMF) will have an active role not only in the accreditation process but also in overcoming some of the limitations mentioned earlier. The accreditation of DCRAs may be given by ACRAA based on set criteria accepted globally and applicable regionally. The association

can also address the institutional, technical, and reputational constraints of DCRAs through its programs that harmonize standards, procedures, methodologies, quality of human resources, and code of ethics of various DCRAs in the region. In addition, ACRAA can devise a system of accreditation and degree of accreditation similar to the one given by the National Recognized Statistical Rating Organization (NRSRO) in the US and some global standards set by the International Organization of Securities Companies (IOSCO). At the same time, ABMF can work towards the harmonization on regulatory frameworks including the standardization of financial reporting and mandatory disclosure of information by issuers of debt instruments. Moreover, the regulatory bodies may allow credit ratings on debt instruments done by DCRAs outside their jurisdiction based on the level and degree of accreditation made by ACRAA.

In the end, careful deliberation is needed to determine the form of the regional initiative in improving the region's CRAs as well as promoting cross-border financial flows to take us steps closer toward deeper economic and financial integration.

Note

This study was originally presented as Towards an Asian Regional Credit Rating Agency: ASEAN Perspective at the Best Practices Dialogue of the Association of Credit Rating Agencies in Asia (ACRAA) held at the Grand Central Hotel, Shanghai, China, on November 16, 2012. This paper was prepared alongside the study of the ASEAN+3 Research Group entitled The International Discussions on the Credit Rating Agencies and Enhancing Infrastructure to Strengthen the Regional Credit Rating Capacity in the ASEAN+3 Region.

References

ACRAA Best practices committee. (2011). Definition of default. Selected articles on best practices and training references for domestic credit rating agencies. Taken from http://acraa.com/images/pdf/2ND%20 ACRAA%20Publication.pdf last October 15, 2012.

Asian Development Bank (ADB). (2015a). *Asian Bonds Online* (Database). Retrieved from https://asianbondsonline.adb.org/regional/data.php.

ADB. (2015b). Emerging East Asian local currency bond markets: A regional update. *Asian Bond Monitor*.

- Philippines: Economic Research and Regional Cooperation Department, Asian Development Bank.
- ADB. (2012). Emerging East Asian local currency bond markets: A regional update. *Asian Bond Monitor*. Philippines: Office of Regional Economic Integration, Asian Development Bank.
- ADB. (2008). Handbook on international best practices in credit rating. Philippines: Asian Development Bank. Retrieved from https://www.adb.org/sites/default/files/publication/27983/orei-handbook-international-best-practices-web.pdf
- Cantor, R., & Packer, F. (1996). Determinants and impact of sovereign credit ratings. FRBNY Economic Policy Review, 37–53. Retrieved from www.newyorkfed.org/ research/epr/96v02n2/9610cant.pdf.
- Castell, M. (2012). International discussions on global CRAs and current conditions of domestic CRAs in Europe. Working Paper for the ASEAN+3 Research Group. Manila: Angelo King Institute, De La Salle University.
- Dacuycuy, L. (2012). Feasibility of mutual recognition by domestic CRAs and regulatory authorities on bond ratings and of an independent regional CRA in ASEAN+4. Working Paper for the ASEAN+3 Research Group. Manila: Angelo King Institute, De La Salle University.
- Dezan Shira & Associates. (2013). China GAAP vs. U.S. GAAP and IFRS. Retrieved on October 24, 2016 from http://www.china-briefing.com/news/2013/02/05/chinagaap-vs-u-s-gaap-and-ifrs.html.
- Duan J.C., & Van Laere, E., (2012). A public good approach to credit ratings—From concept to reality. *Journal of Banking & Finance* 36(2012) 3239-3247. Retrieved from www.asb.unsw.edu.au/.../Jin-Chuan%20 Duan%20-
- Duan, J.C., Sun, J., & Wang, T. (2012). Multiperiod corporate default pre-diction—A forward intensity approach. *Journal of Econometrics*, 170(1), 191-209..
- Dumlao, S. (2011). A framework towards ratings harmonization: Credit ratings as the necessary information infrastructure.
- Financial Stability Board. (2010). *Principles in reducing reliance from CRA ratings*. Retrieved from http://www.financialstabilityboard.org/publications/r_101027.pdf.
- Fitch Ratings. (2012). *Definitions of ratings and other forms of opinion*. Fitch Ratings. Retrieved from http://www.fitchratings.com/web_content/ratings/fitch_ratings_definitions and scales.pdf.
- Ghosh, S., (2006). East Asian finance: The road to robust markets. The International Bank for Reconstruction and Development, World Bank. Retrieved from http://siteresources.worldbank.org/.../Resources/589748.../full report.pdf

- Hunt, J. (2009). Credit rating agencies and the "worldwide credit crisis": The limits of reputation, the insufficiency of reform, and a proposal for improvement. *Columbia Business Law Review*, 109–209.
- IOSCO. (2012). Credit rating agencies: Internal controls designed to ensure the integrity of the credit rating process and procedures to manage conflicts of interest. Retrieved from http://www.fsa.go.jp/inter/ios/20120528-1/02.pdf.
- Jang, H. B., & Hyun, S. (2008). A way forward for Asian bond market development. Institute for Monetary and Economic Research, Bank of Korea.
- KAP Tanudiredja, Wibisana & Rekan (PwC). (2013). *IFRS and Indonesia GAAP (PSAK): Similarities and differences*. Jakarta, Indonesia. Retrieved on October 24, 2016 from http://www.pwc.com.
- KB Financial Group, Inc. (2009). Differences between US GAAP and Korean GAAP. 2009 Annual Report filed to Securities and Exchange Commission on June 15, 2009. Retrieved on October 24, 2016 from http://www.wikinvest.com/stock/KB_Financial_Group,_Inc._(KB)/Differences_Between_Gaap_Korean#tocpage.
- Kathpalia, S. (2011). ASEAN's bond markets: Supporting ASEAN's revival. Standard & Poor's, The McGraw Hill Companies. Retrieved from http://www.standardandpoors.com.
- Mellios, C., & Paget-Blanc, E. (2005). Which factors determine sovereign credit ratings? European Financial Management Association (EFMA) Papers. Retrieved from www.efmaefm.org/efma2005/papers/169-mellios_ paper.pdf.
- Moody's Investor Services. (2006). A guide to Moody's sovereign ratings. *Moody's Special Comment*. Retrieved from www.moodys.com.br/brasil/pdf/SovGuide2006. pdf.
- Morgan, S., & Westerfield, S. (2009). Rating model arbitrage in CDO markets: An empirical analysis. *International Review of Financial Analysis* 18, 21–33.
- Parrenas, J.C. (n.d.). APEC and the development of credit rating agencies in the Asia-Pacific Region. *APEC Review*. Retrieved from http://www.ctasc.org.tw/02publication/review07 02.pdf.
- Parrenas, J., & Waller, K., (2005). Developing bond markets in APEC: Moving forward through public–private sector partnership. *ABA Journal of Banking & Finance*, 20(1), 1–26.
- RAM Consultancy Services Sdn Bhd. (2000). Development of regional standards for Asian credit rating agencies: Issues, challenges and strategic options. *Journal of Banking and Finance*, 15(2), 2000.
- Standard and Poor's. (2012a). How we rate sovereigns. *Global Credit Portal*. RatingsDirect. Retrieved from http://www.standardandpoors.com/ratingsdirect.

Standard and Poor's. (2012b). Corporate and government ratings that exceed the sovereign rating. RatingsDirect. Retrieved from http://www.standardandpoors.com/ratingsdirect.

- Standard and Poor's. (2011). *Credit FAQ: Understanding ratings above the sovereign*. Retrieved from http://www.standardandpoors.com/ratings/articles/en/us/?articleType= HTML&assetID=1245316664774.
- Sy, A. (2009). The systemic regulation of credit rating agencies and rated markets. IMF Working Paper No. 09/129. Taken fromhttps://www.imf.org/en/Publications/WP/Issues/2016/12/31/The-Systemic-Regulation-of-Credit-Rating-Agencies-and-Rated-Markets-23030.
- U.S. Securities and Exchange Commission. (2008). *Annual report on nationally recognized statistical rating organizations*. Retrieved from www.sec.gov/divisions/marketreg/ratingagency/nrsroannrep0608.pdf.

Wright, C.,. (2012). *Emerging Markets ASEAN+3 Bond Market Guide*. Taken from http://www.chriswrightmedia.com/emerging-markets-asean-3-bond-market-guide/last October 15, 2012.

Websites:

- Asian Capital Markets Forum (ACMF). *About the ACMF*. Retrieved from: http://www.theacmf.org/ACMF/webcontent.php?content_id=00001.
- Association of Southeast Asian nations. (2007). Retrieved from http://www.aseansec.org/acmf/introduction.htm.
- OICV-IOSCO. (2012). *Monitoring Board of the International Financial Reporting Standards Foundation*. Retrieved from http://www.iosco.org/monitoring_board/.