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# Dimensions of Regional Processes in the Asia-Pacific Region

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## Part 3. Risks & Challenges

## Introduction

Asia and Pacific's growing importance to the rest of the world is widely acknowledged today. The dynamics of Asian economic development have tremendously impacted global trade relationships and regional cooperation. Thus, it is with great pleasure that we deliver another volume of Research Papers on Asia-Pacific economic issues.

This year we present 19 papers by various authors who examine the Asia-Pacific region from different perspectives. We decided to group them into 3 Chapters:
- Cooperation and trade
- Economy and policy
- Risks & challenges

Papers grouped in the First Chapter describe newly emerging regional trade architecture. You will find there a few analyses of general nature and regional scope (J. Dudziński, A. H. Jankowiak, E. Majchrowska) and some studies on specific trade agreements (A. Klimek writes about Shanghai Free Trade Zone, A. McCaleb and G. Heiduk try to find out what motivates China's cities to establish partner agreements with cities in Asia, B. Michalski analysing U.S.-Republic of Korea Free Trade Agreement, while M. Maciejewski and W. Zysk look for opportunities for Polish exports in the trade agreement between EU and Vietnam).

The Second Chapter is the most diverse one. It is devoted mostly to economic policy issues (including financial sector). S. Bobowski, L. Zyblikiewicz and K. Żukrowska look at the main threads in Asian regionalism. P. Pasierbiak and K. Łopacińska analyse the movements of Chinese capital. M. Dziembała and S. Mazurek deal with the subject of innovation supporting growth and development.

Articles in the Third Chapter are focused on extraordinary events influencing economies and development of the Asia-Pacific region. J. Pera prepared an assessment of risk of APEC countries, based on the country risk classification method and selected indexes of internal stability. A. Kukułka and B. Totleben analyse the impact of natural disasters on gross capital formation in Southeastern Asia. Finally, T. Serwach and M. Grabowski and S. Wyciślak deal with synchronization of business cycles and contagion of crises.

We sincerely hope that all the articles will be of great value to those who want to understand the role of Asia-Pacific economies in the global economy. Through various interests of authors, our volume provides a valuable insight into the problems of this region.

All the papers where submitted for the 8th international scientific conference "Dimensions of Regional Processes in the Asia- Pacific Region" which took place in

November 2015 at Wroclaw University of Economics, under the patronage of Polish Ministry of Foreign Affairs, Ministry of Science and Higher Education and the Ministry of Economy.

We appreciate your time and consideration, and we look forward to the submission of your own good work. We also appreciate the time and effort of our peer reviewers. Thank you!

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# ASSESSMENT OF RISK OF APEC COUNTRIES BASED ON THE COUNTRY RISK CLASSIFICATION METHOD AND SELECTED INDICES OF INTERNAL STABILITY

## OCENA RYZYKA PAŃSTW APEC NA PODSTAWIE METODY KLASYFIKACJI RYZYKA KRAJU I WYBRANYCH WSKAŹNIKÓW ICH ZEWNĘTRZNEJ STABILNOŚCI

**Summary:** The present paper attempts to assess the risk of APEC countries based on methodology of country risk assessment developed by OECD and the level of external stability of the Asia-Pacific region. Countries of the APEC group are safe according to CRCM method, but an analysis of selected indexes of a country's external security indicates otherwise. The risk of crisis and its potential spread over the Asia-pacific countries is high. This applies especially to such countries as: Chile, Indonesia, Mexico, Papua New Guinea, and Peru. At present, the most endangered countries are the ones with lowest gross domestic product per capita. Thus, control over these countries should be established within the group in order to prevent a potential crisis, which may occur in these countries due to the disadvantageous SROB and increasing external debt, from spreading onto other APEC member states and from posing a threat to integration processes of ASEAN countries.

**Keywords:** risk, country, debt, classification, method.

**Streszczenie:** Celem opracowania jest próba oceny ryzyka krajów APEC na podstawie metodologii oceny ryzyka kraju opracowanej przez OECD oraz poziomu zewnętrznej stabilności regionu Azji i Pacyfiku. Kraje układu APEC według metody CRCM są bezpieczne ale analizując wybrane wskaźniki zewnętrznej stabilności kraju – już tak nie jest. Szczególnie wśród takich krajów jak: Chile, Indonezji, Meksyku, Papui Nowej Gwinei i Peru. Należy więc zastosować kontrolę nad tymi krajami, po to aby potencjalny kryzys, który może pojawić się w tych krajach z racji niekorzystnego SROB i rosnącego zadłużenia zewnętrznego, nie rozprzestrzenił się na cały obszar APEC, a tym samym aby nie zagroził procesowi integracji krajów w ramach ASEAN.

**Słowa kluczowe:** ryzyko, kraj, zadłużenie, klasyfikacja, metoda.

## 1. Introduction

Risk is present in all aspects of human existence. It accompanies both activities (risk related to execution of particular tasks) and states (risk related to preservation of a given status quo). Regardless of location, political system, or economic model, risk is an inherent attribute of actions undertaken by entities which constitute a given system.

In order to create future economic events and strive for the elimination or limitation of risk occurring in economic activity, one needs to realise the diversity of risk, classify it and learn the methods of risk management. The issue is especially important to modern global economy which knows no boundaries.

Currently, a general rule concerning risk is in application: the larger the risk within the scope of actions undertaken, the larger the probable gain and effect of these actions – and the other way around, a low risk level accompanies the execution of no more than the assumed objectives.

Economic potential of the Asia-Pacific region is large. However, in order to invest within this region, we must give some thought to the potential dangers resulting from such investments [Stermach 2008]. This issue is currently very important due to numerous turbulences in world economy caused by the increasing debt of countries and occurrence of a number of economic security violations in the form of speculative bubbles. It is also crucial from the perspective of dimension of Asia-Pacific regional processes.

The present paper attempts to assess the risk of APEC countries, based on methodology of country risk assessment developed by OECD and the level of external stability of the Asia-Pacific region.

## 2. Country risk – the review of methods and research presented in the literature

Country risk is a multi-aspect phenomenon in which many social, economic, financial and political variables are closely intertwined. It may be interpreted as a set of different types of risk connected with investing in a given country, including political, currency, economic and transaction risks. It is connected with the factual and expected political and economic conditions in a country and the impact of these conditions on the ability of the government, corporations and natural persons to meet their obligations and liabilities.

As regards the traditional approach, there are two methods for the evaluation of country risk [Manko 2015]: the comparative method and the analytical method. The first group of methods applied for early detection of beneficial or non-beneficial tendencies in a country uses aggregate statistical data. This approach, based on econometric studies, was used at the time of the development of the Political System Stability Index (PSSI).

Another group of comparative methods is the expert assessment, which is in many cases the end product of many consultations, which may be connected with the Delphi method. The classification of countries according to the risk level goes through a few stages, including selection of variables, definition of weight for each variable, processing data with the use of Delphi and the expert scale and development of the output indicator, which is, in many cases, within the range of 0-100.

The first ranking of countries of this type is BERI (Business Environment Risk Index). The evaluation system is based on adding each particular type of risk weight index reflecting its significance to conducting business. In this methodology of evaluation of country risk, the arithmetic mean is calculated from the three elements: political risk (the weighted result of 10 political and social indicators), operational risk (the weighted result of 15 economic, financial and structural variables, estimated with the use of experts) and R-factor (the weighted rating of the existing legislature, the exchange rate, foreign reserves and external debt). The projection of risk with the use of BERI is carried out for 140 countries once per year and once per five years. A group of experts evaluates this type of risk in each region three times per year.

The Bank of America evaluates the level of country risk for 80 countries on the basis of 10 economic indicators (Bank of America World Information Services). The rating for each indicator and the final result (the average value for all parameters) change within the range of 1 (the smallest difficulties) to 80 (great problems). The Bank of America offers its clients the country risk rating in the current year, historical data for 4 years and a projection for 5 years.

Control Risks Group (CRG) measures country risk in about 226 countries and territories on the basis of different possible scenarios and monitors country risk with the use of on-line platforms.

Economist Intelligence Unit evaluates country risk on the basis of the four elements, such as political risk (22% in the overall rating, composed of 11 indicators), the risk of the economic policy (28%, 27 indicators), structural risk (27%; 28 indicators) and liquidity risk (23%; 10 indicators).

Euromoney uses expert appraisals on variables of risk in a given country for the purpose of evaluation of country risk (70% of the rating) in connection with the three basic quantitative values (30% of the rating). Indicators are divided into six categories: economic data (30% of the rating), political risk (30%), structural assessment (10%), debt ratios, unpaid or restructured debt (10%), creditworthiness (10%), access to bank financing, short-term financing and capital markets (10%). The obtained value of country risk ranges between 0 (the highest risk) and 100 (the lowest risk). These figures are converted into 10 categories, from AAA to N/R. The assessment is carried out twice per year, for more than 180 countries.

The PRS Group applies two very important methods of assessment of country risk.

Risk assessment for investors in Political Risk Services (PRS) is carried out in two stages. At the first stage the Prince method is used to project the future political

regime in a given country. There are three most probable scenarios for the next 18 months and 5 years. Next, probability and levels of political unrest are estimated (low, medium, high, very high risk) and 11 more indicators affecting the investment climate in the country are analysed. At the second stage, the obtained estimated figures are grouped (from A to D) in the three investment areas, such as financial transfers, direct investments and export markets.

The second method, International Country Risk Guide (ICRG), is used to assess the risk for 140 countries. This model is based on the analysis of three elements of country risk, including the political element (50 points out of 100 points in the overall rating, 12 indicators), the financial element (25 out of 100, 5 indicators) and the economic element (25 out of 100, 5 indicators). Each of the 22 indicators is measured in its own scale, and the total maximum value is 100 points. At the time of assessment of this type of risk, Moody's Investor Service analyses both the political situation (6 indicators) and the economic situation (7 indicators). The risk rating is alphanumeric and ranges from AAA to C.

Standard & Poor's Ratings Group (S&P) bases its ratings on the projected debt service ability and the probability of failure to meet liabilities. It includes the assessment of political risk (3 indicators) as regards the country's readiness to repay its debt on time and the assessment of economic risk (5 indicators) as the ability to repay debt. The ranking of countries is based on the 3-letter system and ranges from AAA to D.

Analytical methods of risk assessment include [Manko 2015] the special report method, methods of evaluation of probability of occurrence of unfavourable events and econometric methods.

The special report method applied for political risk analysis is the most descriptive of all analytical methods. In the method, the basic variables describing the main characteristics of a given country are analysed by one or more experts and the results of the analysis are presented in the form of a special report. The report usually contains a detailed analysis of the political, social and economic situation of each analysed country, taking into account the specificity of the local environment.

A very good example are the Worldwide Governance Indicators (WGI), developed by a well-known economist, President of the Natural Resource Governance Institute. doctor Daniel Kaufmann and by specialists from the World Bank Aartem Kraay and Massimo Mastruzzi [Kaufmann, Massimo 2010]. WGI is a draft of collective reports and individual indicators for country management for 215 countries in the period of 1996-2013. The aggregate indicators associate the opinions of a great number of enterprises, citizens and experts. They are based on data from 32 different sources produced by different institutes, scientific research, analytical centres, non-governmental organisations and private enterprises.

The event tree analysis is a graphic method of tracing the sequence of possible individual cases, assessment of the probability of occurrence of each indirect event and estimation of the probability of the end event leading to loss. The method allows

to define the overall probability of occurrence of undesirable actions or definition of a particular rating of foreign investment or income from trade.

The tree of rejection is a graphic presentation of the whole chain of events whose consequences might lead to the main event. In other words, the method presents the manner in which certain single events may bring about dangerous situations as a result of the combined effects.

The most popular econometric model for the assessment of country risk was worked out by professors of Syracuse University William Coplin and Michael O'Leary. The model is based on the equation of multiple regressions. In the model political instability is perceived as a phenomenon of the political life of the country, characterised by the common use of violence towards the government in the form of attacks, wars, ethnic conflicts, etc.

A complex risk assessment is carried out with regard to counties at an order of OECD and the assessment is conducted with the use of the Country Risk Classification Method (CRCM), which measures the level of risk of a given country. In other words, it estimates the probability that a given country will be able to repay its external debt. Countries are classified by means of comparison of the two basic components:

- Country Risk Assessment Model (CRAM) – the quantitative assessment of country risk based on three groups of risk indicators (ex-post assessment of cash flows, financial situation and economic situation),
- qualitative assessment of the results of the CRAM model.

Particular countries are rated within the range of 0-7, where 0 means a country with no risk at all, and 7 means the highest risk possible. The classification is developed for and under the supervision of the OECD, for the purpose of minimisation of the risk of transactions secured by the Export Credit Arrangement.

Methods focusing on the evaluation of investment risk are also currently applied for the purpose of assessment of country risk, including for example Bisnode, Coface, Euler Hermes and Maplecroft.

Bisnode's method provides the information on changes in the market of the activity of business partners and the country. The method requires updating data on a permanent basis, which may be considered as its disadvantage because of problems with the continuity of the updates. General information, such as GDP, population and the political system, is also included in reports in order to assure broader understanding of each country, for the purpose of supporting entrepreneurs in the identification of development opportunities and definition of risk connected with the development. This method is effective, provided that data is supplemented on an ongoing basis.

The assessment of country risk carried out by Coface defines the average level of arrears of enterprises in a given country as part of short-term trade transactions conducted by them. The evaluation does not relate to the government debt. In order to define the risk of a given country Coface analyses jointly such elements as economic, political and financial prospects of the country, Coface's experience in the

scope of payment behaviours of countries and the business climate. Ratings are updated on a regular basis, at least once per quarter, during rating committee meetings in the country, when specialists consider changes on a case by case basis. Ratings are given in the 7-point scale: A1, A2, A3, A4, B, C, D (as risk grows).

Euler Hermes' assessment method relates to country risk and is based on in-depth research carried out on the basis of business reports. This method constitutes a review of individual economic profiles of particular countries. The analysis contains sections related to strengths and weaknesses of the country's economy on the basis of the assessment of the country risk level, main sectors of activity and trade partners of countries, economic projections and other projections. Like the methods discusses above, Maplecroft' method is used to evaluate global country risk on the basis of macro-economic data, entered on a quarterly basis.

What the methods applied by Bisnode, Coface, Euler Hermes and Maplecroft have in common, is that they depend on regular updating of data on the basis of which evaluation may be carried out and risk ratings may be given. In turn, this generates risk that the potential assessment may be made on the basis of incomparable and invalid data.

So far, a lot of research has been conducted in the scope of determinants affecting the evaluation of country risk[1]. A few main variables have been identified [Chodnicka, Jaworski 2014]. Cantor and Packer [1996] conducted rating research for 49 countries (1991-1995). They found that there is a group of factors of the strongest impact on the rating, including such indicators as income per capita, GDP growth rate, inflation (CPI), fiscal balance, foreign trade turnover, economic growth indicators (dummy variable according to the classification of the International Monetary Fund) and history of solvency problems (dummy variable).

The determinants they presented explained in 90% the changes occurring in ratings related to the country [Haque et al. 1998] and its classification as regards risk [Chodnicka, Jaworski 2014]. The key variable identified by them is the value of GDP per capita, which explained 80% of changes of ratings [Borensztein, Panizza 2006]. Apart from the factors mentioned above, they also indicated such determinants as changes of interest rates on the international financial market, export structure or concentration of the banking sector [Haque et al. 1998].

At the time of conducting the analysis of the Asian financial crisis, Juttner and McCarthy [2000] indicated importance of such factors as: CPI, foreign debt to export ratio, dummy variable related to problems with solvency, differences of interest rates or the effective exchange rates.

Gaillard referred to such determinants as history of problems with solvency, GDP per capita, debt to public sector revenue ratio, which explain in 80% the changeability of ratings of countries and regions.

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[1] As regards Poland, the most interesting results of risk measurement research may be found in works by P. Chodnicka, P. Jaworski and K. Niewińska, e.g. Chodnicka et al. [2014].

In the research carried out on 17 countries for the years 1989 – 1998, based on ratings published by Moody's, Ferri, Liu & Stiglitz [1999] decided to analyse the pro-cyclicality of the phenomenon in question. They considered the following indicators as the most significant ones: GDP per capita, effective GDP growth, inflation rate, budget deficits, current turnover balance, economic growth indicators, external debt, total of the current turnover balance and short-term debt normalised with foreign reserves. They divided the sample to the pre- and post-crisis periods. For decomposition of the given ratings they used the linear and non-linear methods. The results obtained by them indicate that rating agencies pay more attention to the qualitative assessment than to economic determinants.

## 3. Assessment of risk in APEC countries and its impact on regional processes in the Asia-Pacific region

Countries included in the Asia-Pacific Economic Cooperation (APEC) differ in many respects, it is thus difficult to assess the risk precisely for the whole region without dividing it into individual countries. A complex risk assessment of countries is performed on OECD's commission by means of the CRCM method[2].

The country risk classifications of the Participants to the Arrangement on Officially Supported Export Credits (the Arrangement) are one of the most fundamental building blocks of the Arrangement rules on the minimum premium rates for credit risk. They are produced solely for the purpose of setting minimum premium rates for transactions supported according to the Arrangement and they are made public, so that any country that is not an OECD Member or a Participant to the Arrangement may observe the rules of the Arrangement, if they so choose. Neither the Participants to the Arrangement or the OECD Secretariat endorse nor encourage their use for any other purpose.

The country risk classifications are meant to reflect country risk**.** Under the Participants' system, country risk is composed of transfer and convertibility risk (*i.e.* the risk a government imposes capital or exchange controls that prevent an entity from converting local currency into foreign currency and/or transferring funds to creditors located outside the country) and cases of force majeure (e.g. war, expropriation, revolution, civil disturbance, floods, earthquakes).

The country risk classifications are not sovereign risk classifications and should not, therefore, be compared with the sovereign risk classifications of private credit

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[2] The Country Risk Classification Method – CRCM measures the risk level of a given country, in other words, it assesses the likeliness that a given country will be able to pay its external debts back. Countries are classified by comparison of two basic constituents:
- Country Risk Assessment Model (CRAM) – quantitative assessments of state's risk based on three groups of risk indexes (ex post assessment of financial flows, the financial situation, and the economic situation),
- qualitative assessment of CRAM model results.

rating agencies (CRAs). Conceptually, they are more similar to the "country ceilings" that are produced by some of the major CRAs.

According to the rules of the Arrangement, two groups of countries are not classified. The first group is not classified for administrative purposes and is comprised of very small countries that do not generally receive official export credit support. For such countries, the participants are free to apply the country risk classification which they deem appropriate. The second group of countries is comprised of High Income OECD countries and other High Income Euro-zone countries. Transactions involving obligors in these countries (and any countries classified in Category 0) are subject to the market pricing disciplines set out in Article 24c) and Annex XI of the Arrangement.

All other countries (and a limited number of supranational multilateral/regional financial institutions) are classified into one of eight categories (0-7) through the application of a two-step methodology:

1. The Country Risk Assessment Model (CRAM) produces a quantitative assessment of country credit risk based on three groups of risk indicators (the payment experience of the Participants, the financial situation and the economic situation);

2. A qualitative assessment of the CRAM results by country risk experts from OECD members, considered country-by-country to integrate political risk and/or other risk factors not taken (fully) into account by the CRAM;

3. Accordingly, the final country risk classifications are achieved through a thorough discussion amongst experts and a consensus-building process.

The group of country risk experts meet several times a year. These meetings are organised so as to guarantee that every country is reviewed whenever a fundamental change is observed and at least once a year. Although the meetings and details of the CRAM are confidential and no official reports of the deliberations are made publicly available, the list of country risk classifications is published after each meeting.

APEC countries were analysed over the period since the last global financial crisis in order to visualise its potential impact on the economies Asia-Pacific Economic Cooperation members. As it has been mentioned before, the area of Asia-Pacific Economic Cooperation is not homogenous in many respect and risk assessment differs greatly from country to country – Table 1. Within the analysed period of 2007-2015, 33 instances of risk level violation have been noted in 6 countries.

Australia, New Zealand, Japan, Canada, South Korea, Singapore, and the USA have been risk-free countries. In the years 2007-2015, these countries were ranked by CRCM as the zero-risk category. These are the countries where investment risk levels are the lowest. Additionally, Singapore and South Korea belong to Four Asian Tigers.

Low risk, level 1 and 2, was noted for: Hong Kong and Brunei, Chile, China, Malaysia, and Taiwan. Malaysia is one of the fastest developing countries in South-

**Table 1.** The risk in APEC country according to the OECD classification in period 2007-2015

| Country*/Year/ Classification | Period | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Australia | 0 | 0 | 0 | 0 | 0 | 0 | - (6) | - (6) | - (6) |
| Brunei | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Canada | 0 | 0 | 0 | 0 | 0 | 0 | - (6) | - (6) | - (6) |
| Chile | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - (6) | - (6) |
| China | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Hong Kong | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Indonesia | 5 | 5 | 5 | 4 | 4 | 3 | 3 | 3 | 3 |
| Japan | 0 | 0 | 0 | 0 | 0 | -(6) | -(6) | -(6) | -(6) |
| Korea South | 0 | 0 | 0 | 0 | 0 | 0 | - (6) | -(6) | -(6) |
| Malaysia | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mexico | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| New Zeland | 0 | 0 | 0 | 0 | 0 | 0 | - (6) | - (6) | - (6) |
| Papua New Guinea | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Peru | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| The Philippines | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
| Russian Federation | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 4 |
| Singapore | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Taiwan | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Thailand | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| United States of America | 0 | 0 | 0 | 0 | 0 | 0 | - (6) | - (6) | - (6) |
| Viet Nam | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |

Note: Data – as of the end of the year; (6) – High Income OECD Country not reviewed or classified; * Country Risk Classifications of the Participants to the Arrangement on Officially Supported Export Credits (The OECD Country Risk Classification Method); the gray colour indicates the level of risk violations (index above 3).

Source: Own study based on [OECD 2015].

**Table 2.** The level of external stability of APEC countries in period 2007-2015 – selected indicators

| Country/The level of external stability of the country/GDP per capita/Period | | GDP per capita in USD in 2015 2007 | Period | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | |
| Australia | Current account balance to GDP in percent | 37 828 | +3,25 | +3,41 | +3,01 | +2,00 | +1,00 | -0,5 | -1,85 | -4,10 | -2,90 |
| | External debt in million USD | | 994010 | 1010001 | 1122874 | 1140745 | 1156676 | 1189094 | 1203214 | 1224414 | 1759864 |
| Brunei | Current account balance to GDP in percent | 25 140 | -2,00 | -3,87 | +2,01 | +10,98 | +15,98 | +19,76 | +29,70 | +43,0 | +26,4 |
| | External debt in million USD | | 1212345 | 1115432 | 10098734 | 908765 | 100004321 | 7623127 | 632987 | - | - |
| Canada | Current account balance to GDP in percent | 38 293 | +3,56 | +4,31 | +2,01 | -1,12 | +1,23 | -1,32 | -2,89 | -3,40 | -3,20 |
| | External debt in million USD | | 3900453 | 4010234 | 4155431 | 4233331 | 437654 | 4432189 | 45389762 | 4676511 | 4699548 |
| Chile | Current account balance to GDP in percent | 9 848 | -2,98 | -1,05 | -2,22 | -2,34 | -2,78 | -3,01 | -3,79 | -3,40 | -1,20 |
| | External debt in million USD | | 5134 | 5643 | 5945 | 6123 | 6543 | 6689 | 6923 | 7154 | 8531 |
| China | Current account balance to GDP in percent | 3 866 | +1,08 | +1,00 | +1,54 | +1,45 | +1,78 | +1,89 | +1,98 | +2,00 | +2,10 |
| | External debt in million USD | | 6032 | 6543 | 7001 | 6989 | 7245 | 7676 | 8123 | 8632 | 8955 |
| Hong Kong | Current account balance to GDP in percent | 34 222 | +2,34 | +2,45 | +2,89 | +3,21 | +2,89 | +2,10 | +2,00 | +1,50 | +1,90 |
| | External debt in million USD | | 1204567 | 1213423 | 1226754 | 1250987 | 1267678 | 1273420 | 1285432 | 1291028 | 1286525 |
| Indonesia | Current account balance to GDP in percent | 1 866 | -1,23 | -1,34 | -1,98 | -2,43 | -2,98 | -3,56 | -3,01 | -3,20 | -2,95 |
| | External debt in million USD | | 212340 | 223410 | 225640 | 236755 | 243897 | 254209 | 259987 | 264060 | 292578 |
| Japan | Current account balance to GDP in percent | 37 595 | +2,34 | +2,00 | +2,12 | +2,23 | +2,00 | +1,54 | +1,00 | +0,50 | +0,70 |
| | External debt in million USD | | 210986 | 223456 | 229899 | 249877 | 268760 | 298324 | 305632 | 328922 | 340373 |
| Korea South | Current account balance to GDP in percent | 24 566 | +4,45 | +4,98 | +4,78 | +4,00 | +4,97 | +5,12 | +5,25 | +5,80 | +6,30 |
| | External debt in million USD | | 320987 | 347654 | 35432 | 365412 | 387390 | 398421 | 405431 | 425449 | 418910 |
| Malaysia | Current account balance to GDP in percent | 7 304 | -2,67 | -3,45 | -2,56 | +1,56 | +2,67 | +3,78 | +4,00 | +4,20 | +7,10 |
| | External debt in million USD | | 176321 | 179643 | 170432 | 187300 | 189856 | 190532 | 191543 | 195483 | 201638 |
| Mexico | Current account balance to GDP in percent | 8 626 | -1,00 | -1,23 | -1,23 | -1,56 | -1,00 | -1,56 | -1,63 | -1,80 | -2,10 |
| | External debt in million USD | | 121453 | 128743 | 130005 | 132087 | 135321 | 139732 | 140432 | 149190 | 153448 |
| New Zeland | Current account balance to GDP in percent | 29 201 | +3,82 | +3,94 | +3,02 | +2,76 | +1,09 | -1,21 | -2,98 | -3,40 | -3,30 |
| | External debt in million USD | | 198564 | 197699 | 200002 | 210231 | 216221 | 239332 | 240201 | 159820 | 162546 |
| Papua New Guinea | Current account balance to GDP in percent | 1 121 | -21,00 | -20,45 | -19,87 | -19,54 | -17,99 | -16,76 | -15,45 | -13,70 | -11,40 |
| | External debt in million USD | | 5678908 | 5453487 | 5321876 | 5064231 | 4987453 | 49877765 | 5098453 | - | - |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Peru | Current account balance to GDP in percent | 4 151 | -6,87 | -6,98 | -5,54 | -5,32 | -4,98 | -4,67 | -4,50 | -4,40 | -4,10 |
| | External debt in million USD | | 87623 | 74327 | 79543 | 70987 | 69453 | 68754 | 66433 | 64355 | 65074 |
| The Philippines | Current account balance to GDP in percent | 1 649 | -2,67 | -2,98 | -3,01 | -1,98 | +2,01 | +2,98 | +3,87 | +4,20 | +4,40 |
| | External debt in million USD | | 59765 | 65432 | 67321 | 69121 | 70032 | 72345 | 75321 | 78489 | 77674 |
| Russian Federation | Current account balance to GDP in percent | 6 844 | +2,67 | +2,23 | +2,01 | +1,98 | +1,87 | +1,76 | +1,72 | +1,64 | +3,09 |
| | External debt in million USD | | 765 | 742 | 701 | 698 | 665 | 621 | 601 | 559 | 556 |
| Singapore | Current account balance to GDP in percent | 38 088 | +24,89 | +23,87 | +20,78 | +21,21 | +20,56 | +19,98 | +19,01 | +18,39 | +19,0 |
| | External debt in million USD | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Taiwan | Current account balance to GDP in percent | 3 866 | +1,08 | +1,00 | +1,54 | +1,45 | +1,78 | +1,89 | +1,98 | +2,00 | +2,10 |
| | External debt in million USD | | 6032 | 6543 | 7001 | 6989 | 7245 | 7676 | 8123 | 8631 | 8955 |
| Thailand | Current account balance to GDP in percent | 3 451 | -3,67 | -2,98 | -2,95 | -2,00 | -1,96 | +2,01 | +1,00 | -1,00 | +3,50 |
| | External debt in million USD | | 123546 | 127654 | 130231 | 135908 | 138900 | 138900 | 140000 | 140698 | 138016 |
| United States of America | Current account balance to GDP in percent | 46 405 | +3.40 | +2,34 | +1,23 | +2,20 | -2,32 | -2,39 | -2,39 | -2,40 | -2,40 |
| | External debt in million USD | | 8965432 | 8432198 | 8034215 | 8432987 | 8034210 | 7032167 | 7123125 | 6915258 | 6793958 |
| Viet Nam | Current account balance to GDP in percent | 1 078 | -3,23 | -2,31 | +3,24 | +1,23 | +2,29 | +3,98 | +4,09 | +4,20 | +4,40 |
| | External debt in million USD | | 74325 | 70543 | 68765 | 65432 | 64378 | 62987 | 60342 | 59133 | 45243 |

Note: Data – as of the end of the year; USD exchange rate of 27/07/15; the gray colour refers to levels of the violations.

Source: Own study, based on [Trading Economics 2015].

Eastern Asia, with an increasing share of industry in the country's economy. Malaysian authorities try to attract foreign investors, especially in advanced technologies, the export if, however, still dominated by crude oil and natural gas, whose high prices on world markets over the past few years stimulate the country's economy and result in a boost in gross domestic product.

The risk for the Sultanate of Brunei should also receive a positive assessment. Stability in this country is guaranteed by the most important person in the country – the sultan, who is both the head of the state and the government. Brunei Darussalam owes such a low risk level to natural resources, such as crude oil and natural gas. Hong Kong, China, and Taiwan belong to the same cultural circle. These countries feature a very large potential for investment. Chile is an exception. Due to numerous internal conflicts, it was forced to adopt a policy friendly for potential investors.

On the verge of secure and insecure – with level 3 – there are: Mexico, Peru, The Philippines, Russia, Indonesia, and Thailand. In 2015, Russia noted security level 4, although it should be attributed to the European Union's sanctions related to the conflict in Ukraine. Unless the conflict spreads onto other countries, Russia may be expected to regain a safe level (no more than 3). Thailand's economic strength lies in a well-developed infrastructure, as well as policy promoting enterprise and investment [Stermach 2008].

The Philippines are developing at the rate of 8% per year (the fastest in the last 25 years) due to state intervention and transfers of income from numerous citizens working outside the country. A number of social and economic reforms and encouragement addressed at investors resulted in the fact that Indonesian stock market was one of the three with highest returns in the years 2007-2009, which opportunity was skilfully used by risk-taking investors [Stermach 2008]. Mexico and Peru feature a large investment potential, but due to mob-related danger, the risk is maintained close to the safety line.

According to the CRCM classification, countries with the highest risk level 5 were: Papua New Guinea, and Vietnam. Vietnam still remains deeply enrooted in communism. Thus, the assessment of OECD experts comes as no surprise. As for Papua New Guinea, the country is very poor and faces a lot of domestic problems.

Despite the financial crisis of 2007 and its negative consequences for the world economy in the following years, the APEC area – from the point of view of CRCM methodology and investment risk – was relatively safe. The riskiest countries: Vietnam and Papua New Guinea do not pose a serious threat for the stability of this area and integration processes within the Asia-Pacific region.

Detailed account of country's risk level is presented in Table 2. It compiles two selected indexes defining the level of the country's external security, that is foreign debt and the balance of current turnover, as percentage of gross domestic product (SROB). This is, in a way, an early warning system, because it points to the existing instances where the above-mentioned indexes were violated, which may potentially

lead to crisis phenomena that will increase the risk level of a given country and have a negative influence on the security level of the whole APEC area.

Balance of current turnover is of crucial importance to the macroeconomic stability of a given country. It is a collective measure of this country's accounts with world economy resulting from current sales and purchase operations of goods and services. If the balance is negative – there is a deficit in current turnover, this means that a portion of goods and services was purchased on credit; and as such it is a measure of foreign debt of a given economy within a given period and defines the pace of increase in foreign debt.

Table 2 compiles 80 examples of violations within the scope of SROB. The instances of security level violations over the past two years, 2014-2015, are especially worrying. These have happened in 9 countries: Australia, Canada, Indonesia, Mexico, New Zealand, Papua New Guinea, Peru, and the United States of North America. The level of these violations fell within the range of: -1.0% in 2014 in Thailand (lowest level) to – 13.70% in 2014 in Papua New Guinea (highest level).

Within the whole analysed period of time, violations within the scope of SROB occurred in 5 countries: Chile, Indonesia, Mexico, Papua New Guinea and Peru. These are the countries that face domestic problems such as: corruption, organised crime, a relatively low gross domestic product per capita, increase in unemployment. It is also worth noticing that in the case of Indonesia, Papua New Guinea, and Peru – gross domestic product per capita falls within very low range: 1866 USD, 1121 USD, and 4151 USD respectively, which proves that these countries are growing poorer and suggests a significant danger of debt crisis (debt of these countries in relation to gross domestic product per capita is considerable). The SROB level in Papua New Guinea is especially alarming. Over the entire analysed period, it reached two digit numbers from –21.0% in 2007 to –11.40% in 2015, which indicates clearly a high debt level and a disadvantageous ration of debt to gross domestic product PKB.

In other countries, that is Chile, Indonesia, Mexico, and Peru, SROB took one-digit values, but – as has been mentioned before – they were disadvantaged when compared by gross domestic product. The respective numbers were: for Chile –2.98% in 2007 to –1.20% in 2015; for Indonesia –1.23% in 2007 to –2.95 % in 2015; for Mexico –1.0% in 2007 to –2.10% in 2015; and for Peru –6.87% in 2007 to –4.10% in 2015.

Taking the above deliberations into consideration, control over these countries should be established within the group in order to prevent a potential crisis, which may occur in these countries due to the disadvantageous SROB and increasing external debt, from spreading onto other APEC member states.

# 4. Conclusion

Based on the analysis presented here, it may be claimed that APEC countries – similarly to other countries in present times – are not free from exceeding debt. This results mostly from the economic level of these countries, but also from a general tendency which can be observed in the world economy within this scope. Exceeding debt is a result of over-production and consumptionist model of economy.

Countries of the APEC group are safe according to CRCM method, but an analysis of selected indexes of a country's external security indicates otherwise. The risk of crisis and its potential spread over the Asia-pacific countries is high. This applies especially to such countries as: Chile, Indonesia, Mexico, Papua New Guinea, and Peru. The most endangered countries at present are the ones with lowest gross domestic product per capita. Thus, as mentioned before, certain control over these countries should be established within the group in order to prevent a potential crisis from spreading onto other APEC member states and posing danger to integration processes of ASEAN countries.

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