Benefits, Costs, and Feasibility of a Monetary Union for the Association of Southeast Asian Nations (ASEAN)

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Abstract

The European Monetary Union's struggle to survival has been a great case study as it provides valuable insights into the benefits and costs of adopting a monetary union. The benefits are numerous, including the elimination of foreign exchange uncertainty and transaction costs, the abolition of competitive devaluations, specialization in trade and finance, economies of scale, and reduction of borrowing costs. Meanwhile, the risk stemming from ceding the independent monetary authority also poses as a major challenge, with the surrender of central banks' monetary authorities as a major criticism. While the debate is still heating, the Association of Southeast Asian Nations (ASEAN) is currently standing at a unique crossroad—to adopt or not to adopt a monetary union. Through quantitative and qualitative methods, the paper concludes that the ASEAN founders, including Thailand, Singapore, Indonesia, Malaysia and Philippines, are not yet ready to adopt a monetary union. This paper also suggests that, even though the ASEAN demonstrates many evidences of economic integration momentarily, the group as a whole needs to step up and more effective policies are necessary to make an ASEAN monetary union realistic. These policies must aim to increase labor and capital mobility as well as interregional trades among all countries. Besides, as a result of the European debt crisis, a fiscal union must also be taken into consideration should an ASEAN monetary union takes any formal forms of discussion in the near future.

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I. Introduction

> "My brother, if you mint coins, I want you to adopt the same divisions of value as in French money ... I've already done the same thing for my own Kingdom of Italy. The confederated Princes have done the same thing. That way there will be uniformity of currency throughout Europe, which will make trading much easier."
> -Napoleon Bonaparte (Napoleon I)
> —May 6th, 1807—in a letter to his brother Joseph, King of Naples[2]

Will a nation increase its economic development when abolishing its national currency and instead adopting a currency of a wider region? Is it even feasible to have a common currency for a region as a whole? It is not until the turn of the century that the answer to the latter question became 'yes,' with the establishment of the Euro, the world's first regional common currency. Sadly, until today, the answer to the former is still debatable, and with the phantom of debt overshadowing Europe, many are questioning the viability and legitimacy of the Euro in the first place. In 1961, Professor Robert Mundell published a paper titled *Theory of Optimum Currency Area* (OCA), a work which later earned him a Nobel Prize in Economics, and also paved a way for the establishment of the Euro. The theory argues that maximum economic efficiency would be achieved if a particular region shares a single currency. Particularly, advantages of an OCA include improvement in price comparability, cross-border investments, labor mobility, general trades, foreign direct investments, and elimination of transaction costs, among others. However, no benefits come without a price, and some of the major disadvantages of an OCA comprise a loss of autonomy over a nation's monetary policies, and in the European case, a limited loss of political and potential fiscal autonomy as well. Furthermore, it should be taken into consideration that benefits received from an OCA also include the intangibles, for example an increase in political cohesion and stability amongst the OCA members, since arguably, an increase in trade and cooperation amongst countries tend to deliver developments in the social and political scenes.

The purpose of this paper is thus to assess the benefits, costs and feasibility of creating a monetary union in the ASEAN (the Association of Southeast Asian Nations). In order to accomplish this objective, both quantitative and qualitative approaches will be implemented. Quantitatively, the paper will present results from econometric models that will help show evidence of economic convergence in the five founding members of ASEAN (Thailand,

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2 Liebreich.com. "Euroquotes." 2011. Liebreich.com. 5 January 2011 <http://www.liebreich.com/LDC/HTML/Europe/08-Euro.html>.

Malaysia, the Philippines, Singapore, and Indonesia) because of their importance to the region, both economically and politically. This paper will then try to demonstrate that, as in the case of the EU, no matter how much economic convergence there is, a common currency cannot survive without a collective political will. The paper is therefore divided into six sections:

1. Background of Professor Mundell's *Theory of OCA* and literature that shares a similar topic to this paper
2. Benefits and Costs of having a common currency
3. Background of the pioneering model of the European Monetary Union and how the Euro came to existence
4. Background and political assessment of the ASEAN and its recent developments
5. Introduction and discussion of econometric models as well as their results
6. Conclusion and recommendations

After analyzing the matter both quantitatively and qualitatively, readers will see whether the ASEAN should be able to pursue a common currency. Eventually, the ultimate purpose of this paper is to explore an option that will help improve or develop the economic welfare of the corresponding region. Even if the time is not yet ripe for a monetary union model for the ASEAN, when necessary steps are taken in the right direction, more and more political and economic stability will be brought to a region already filled with much unrest in its history since the colonization era.

II. Literature Review

"The best approach, in my opinion, would be to inaugurate a new process of international monetary reform with the goal of restoring the international monetary system, increasing international monetary integration, and working to construct a universal unit of account and an international currency. As Paul Volcker has said, the global economy needs a global currency."
- Robert Mundell, *The Significance of the Euro in the International Monetary System*

The most well-known theory of Optimum Currency Areas (OCA) was pioneered and made popular by Robert Mundell in 1961. Defending his points, Mundell concludes: "Similarly, if factors are mobile across national boundaries then a flexible exchange system becomes unnecessary, and may even

be positively harmful, as I have suggested elsewhere."[3] In addition, Mundell presents in another paper, titled "The Monetary Dynamics of International Adjustment Under Fixed and Flexible Exchange Rates," that stabilization policy, including both monetary and fiscal policies, would be more effective under fixed exchange rates systems if short-term capital was mobile, and vice versa.[4] Thus, it is conclusive to point out the most important factor in Mundell's theory, and also the only point that possibly makes the theory of OCA valid, is the mobility of capital and labor in a particular region. Regarding this point, the United States of America is a more successful currency union than the European Monetary Union simply because the mobility of labor in the US is more flexible than in Europe. Furthermore, Professor Mundell also states that the other two relevant criteria for a common currency are price and wage flexibility as well as an automatic fiscal transfer mechanism.

Besides, in his paper, Mundell shares a view that is supportive of a point mentioned earlier in the Introduction section:

> In the real world, of course, currencies are mainly an expression of national sovereignty, so that actual currency reorganization would be feasible only if it were accompanied by profound political changes. The concept of an optimum currency area therefore has direct practical applicability only in areas where political organization is in a state of flux, such as in *ex-colonial areas* and in Western Europe. (Mundell)

ASEAN, therefore, as a profound example of an ex-colonial area, can very well be a possible candidate for Mundell's theory. Further, he also presents two opposite arguments that are familiar to the central debate of the validity of the Euro since its creation. The first is defended by J.E Meade, who argues Western Europe does not possess the necessary qualifications to satisfy the *Theory of Optimum Currency Areas*, citing the lack of labor mobility and suggesting a system of flexible exchange rates would be more desirable in promoting balance-of-payments and internal equilibrium. The opposing view is of Tibor Scitovsky, who advocates a common currency for the region, believing the EMU will promote capital mobility by itself, but also suggesting that further steps must be taken to increase labor mobility and to develop supranational employment policies (Mundell). Although it has been around for a little more than a decade, the Euro has gone through a tough period with many peaks

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3 Mundell, Robert. "A Theory of Optimum Currency Areas." The American Economic Review (1961): 657-665.
4 "The Monetary Dynamics of International Adjustment Under Fixed and Flexible Exchange Rates." The Quarterly Journal of Economics May 1960: 227-257.

and troughs. Time may eventually be the only judge whether Scitovsky's or Meade's argument holds true. In general, Mundell's Theory of Optimum Currency Areas is essential as it serves as a groundwork for this paper. To sum up the necessary criteria of a successful currency union, George Tavlas, the Director General of the Bank of Greece and Alternate to the Governor of the Bank of Greece on the European Central Bank Governing Council, identifies, "similarity of inflation rates, degree of factor mobility [including capital and labor mobility] ; openness and size of the economy; degree of commodity diversification; price and wage flexibility; degree of goods market integration; fiscal integration; the need for real exchange rate variability; and political factors."[5] The later sections will discuss how the ASEAN copes with these criteria.

Despite the current turmoil in Europe, which has severely undermined the credibility of the Euro, the early days of the world's first common currency has attracted much academic attention and as a result, many papers were born debating the real benefits and costs of Mundell's theory. Many have taken a step further and suggested a similar model applied elsewhere in the world. Certainly, the ASEAN, because of its historical and strategic importance, cannot escape this widespread interest. In a research titled "Convergence and Its Implication for a Common Currency in ASEAN," published in the *ASEAN Economic Bulletin* in 2003, Bunyaratavej and Hahn focused on using the statistical beta convergence model in order to find the standard deviation of GDP per Capita across the ASEAN members. The paper then concludes the standard deviation for all the ASEAN countries is so large that there is little convergence in terms of GDP per capita, thus suggesting this may not be an ideal time for an adoption of the common currency in the ASEAN. However, the authors also suggest the results yield a positive convergence for the ASEAN-6 (Brunei, Indonesia, Malaysia, the Philippines, Thailand and Singapore), or those that have relatively similar economic growth; thus, these countries may become ideal for a common currency integration (Bunyaratavej and Hahn). This point fits my hypothesis, which is that the founding members will be better candidates for a common currency area.

This idea is again reinforced by Obiyathulla Bacha of the International Islamic University of Malaysia in his paper "A Common Currency Area for the ASEAN? Issues and Feasibility," published in the *Applied Economics Journal* of 2008: "The results show an absence of broad-based common linkages. Instead, several paired clusters are identified as potential candidates. The results imply that while a region wide CCA may not now be feasible, a strategy of beginning with paired clusters and then expanding may be a logical progres-

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5 Venner, K. Dwight. Discussant Paper on Regional Monetary Arrangements: How Can Monetary Policy
    be Conducted in the Union? Discussant Paper. Washington, D.C: International Monetary Fund, 2002.

sion if a currency union is a desired objective."[6] In his conclusion, Bacha recommends potential member countries to maintain an improvement in price stability, the independence of central banks, structural reforms for the financial supervision and banking sector, but also agrees on the ground that indeed the path to a common currency is strictly a political one (Bacha).

Furthermore, many senior theses adopting a similar topic were also studied. Rafi Chaudhury of Middlebury College and Moises Numa of Babson College, whose papers were both published in the *Michigan Journal of Business*, explored this topic using different statistical methodologies. Chaudhury's econometric model is drawn from the "OCA Index" method first introduced by Bayoumi and Eichengreen in 1997. The idea of the model is to gauge the country members' suitability for a common currency on the basis of bilateral exchange rate volatility relative to an anchor currency. Chaudhury concludes the OCA eligibility is at its highest for the seven ASEAN countries studied, but the author cautiously suggests that further infrastructure improvement and competitiveness is necessary prior to further steps in the integration process. On the other hand, Numa focuses on the common currency topic in the Latin America region, with the MERCOSUR[7] group as his target. In his study, Numa used three different econometric models: the Ordinary Least Square regression, Granger Causality and Vector Autoregression (VAR). Numa concludes that because of the variety of volatility in the MERCOSUR group, the member countries are not yet ready for an outright currency union, and further political and economic integration is deemed necessary for the group.

III. Benefits and Costs of a Common Currency Area

"Europe exemplifies a situation unfavourable to a common currency. It is composed of separate nations, speaking different languages, with different customs, and having citizens feeling far greater loyalty and attachment to their own country than to a common market or to the idea of Europe."
-Professor Milton Friedman, *The Times*, 19 November 1997

Studying the real benefits and costs of a common currency is not an easy task, since a thorough study requires assessing all the effects a common currency has on macroeconomic, microeconomic and also political elements of a participating country. Moreover, whereas the costs are often associated with the macroeconomic management level of an economy, the benefits are mostly felt at the microeconomic level, since a transformation into a common curren-

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6 Bacha, Obiyathulla. "A Common Currency for the ASEAN? Issues and Feasibility." Applied Economics (2008): 515-529.

7 MERCOSUR is a trade agreement amongst Argentina, Brazil, Paraguay, and Uruguay.

cy is theoretically expected to lead to gains in economic efficiency and trade. The gains in efficiency are primarily due to the elimination of transaction costs stemming from exchanging national currencies and also the elimination of risk as a result of the uncertain future movements of exchange rates. In a working paper titled "Euros and Zeros: The Common Currency Effect on Trade in New Goods," published by the National Bureau of Economic Research, Richard Baldwin and Virginia Di Nino suggest the "Theory of New Goods": "The new-goods hypothesis suggests that common Euro-usage lowers trade costs and thus stimulates trade via the extensive margin (more products are traded) and the intensive margin (the trade in products that are already traded rises)".[8] The authors then conclude:

> Our empirical findings provide supportive but not conclusive evidence for the new-goods hypothesis. In particular, our Logit estimates – which gauge the impact of common Euro-usage on the probability of observing a positive trade flow at the highly disaggregated level – indicate a positive finding for seven of the eleven Eurozone nations on our exporter databases and nine of the eleven on our importer databases. (Baldwin)

Clearly, the surge in trade has been evident in the Eurozone especially after the Treaty of Maastricht, which paved the way for the establishment of the Euro, was passed in 1992. Exhibit A shows a similar upward trajectory as seen not only in the Eurozone but also in many other regions that adopted free-trade agreements, including the ASEAN, NAFTA and MERCOSUR.[9]

Furthermore, in *Costs and Benefits of Monetary Union*, Professor Paul De Grauwe of the University of Leuven, Belgium suggests that the original theory introduced by Mundell is too pessimistic regarding the costs of adopting a monetary union. He establishes his view on the following points:

> Firstly, the ability of exchange rate changes to absorb asymmetric shocks[10] is weaker than the traditional (Keynesian-inspired) OCA theory has led us to believe. Exchange rate changes usually have no permanent effects on output and employment. Secondly, countries that maintain independent monetary and exchange rate policies often

8 Baldwin, Richard and Virginia Di Nino. Euros and Zeros: The Common Currency Effect on Trade in New Goods. Working Paper. Cambridge, MA: National Bureau of Economic Research, 2006.

9 MERCOSUR is the political and economic union made up of Argentina, Brazil, Paraguay and Uruguay.

10 Asymmetric shocks refer to changes in macroeconomic conditions affecting differently the different parts of a country, or different countries of a region. This is often used as an argument against the formulation of the Euro.

find out that the movements of exchange rates become a source of macroeconomic disturbances, instead of being instruments of macro-economic stabilization.[11]

However, he concludes that the cautious view originally introduced by Mundell should not be disregarded, since it is built based on political and institutional uncertainties, which are all relevant to the establishment of a common currency. The primary concern a nation state has when joining a monetary union is foregoing its own currency, which also means abandoning its independent monetary policies (ie. devaluation of currency). In addition, De Grauwe also points out that differences in labor market conditions and policies, legal systems, tax and spending policies will inevitably lead to divergence in national output and prices, posing difficult national adjustment processes. However, he also suggests two strategies that can minimize this adjustment cost. The first is to make the markets more flexible, thus the adjustments, as a result of asymmetric shocks, can be more efficient. The second is to increase political unification, which in turn will reduce asymmetric disturbances that have political and institutional origins.

IV. The Pioneering Model: The European Union and the European Monetary Union

"A day will come when all nations on our continent will form a European brotherhood … A day will come when we shall see … the United States of America and the United States of Europe, face to face, reaching out for each other across the seas."
-Victor Hugo, Paris 1849[12]

No international organizations and systems, whether political or economic, can be fully understood without their historical context. The European Monetary Union is not an exception. My objective in this section is to understand why the idea of a "Common Currency Area" can flourish and appeal to millions of people in this particular region of the world. Later on, understanding how the European Monetary Union comes into existence will be vital on my quest to establish a comparison with the ASEAN. According to a European Commission document called "Europe in 12 Lessons," the European Union

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11 Baldwin, Richard and Virginia Di Nino. Euros and Zeros: The Common Currency Effect on Trade in New Goods. Working Paper. Cambridge, MA: National Bureau of Economic Research, 2006.

12 Think Quest. European Community. 28 September 2011 <http://library.thinkquest.org/C005121/data/Euro.htm>.

was originally established based on these essential objectives:[13]

1. Peace

2. Safety and security

3. Economic and social solidarity

4. Promotion of the European model of society

Regarding the first goal, the author Fontaine states that after the two devastating wars, Europe needed to put an end to the regional hatred and rivalry. On May 9th 1950, the French Foreign Affairs Minister Robert Schuman executed the proposal of setting up the European Coal and Steel Committees (ECSC). Two important characteristics involved in this agreement are the creation of a free trade area and a common market for many basic industrial materials and services, for example, coal, coke, iron ore, steel and scrap. As the first European supranational organization, the ECSC was popularly viewed as a major success, simply because when non-tariff barriers to trade were removed, production outputs and inter-state trade increased quickly.[14] Later, in 1957, the ECSC went on to become the European Economic Community (EEC). The EEC mainly governed the removal of custom duties and the creation of common policies, in terms of trade and agriculture, for the member countries in the 1960s (Fontaine).

This regional cooperation was so attractive that three other European nations, namely Denmark, Ireland and the United Kingdom in 1973 decided to join the EEC. This marked the initial expansion of the European Union and also a major groundwork for the Treaty of Maastricht—a landmark in the development of the Euro. Regarding the next three objectives, Fontaine expresses:

> In the long run, every EU country benefits from this cooperation. Half a century of European integration has shown that the whole is greater than the sum of its parts. The EU as a unit has much more economic, social, technological, commercial and political 'clout' than the individual efforts of its member states, even when taken together. There is added value in acting as one and speaking with a

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13 Fontaine, Pascal. Europe in 12 lessons. Documentation. Brussel, Belgium: Office for Official Publications of the European Communities, 2003.

14 Nugent, Neil. The Goverment and Politics of the European Union. London: Palgrave MacMillan, 2010.

single voice as the European Union. (Fontaine)

Thus, we can conclude that the idea of a supranational organization like the European Union originates from, first and foremost, the willingness of promoting regional cooperation and harmony amongst member nations. Without the European Union, there would be no European Monetary Union. In effect, the Euro, though it may be thought as more of an economic idea, is deeply rooted from a political motive.

Another major turning point for the development of the regional cooperation in Europe is the establishment of the European Monetary System in 1979. The purpose of such decision then, according to Fontaine, was to help, "stabilise exchange rates and encourage the Community member states to implement strict policies that allowed them to maintain their mutual solidarity and to discipline their economies" (Fontaine). This commitment to the stability of the exchange rates resulted from the Bretton Wood system[15] followed by the two oil crises of 1973 and 1979. Finally, another decisive moment in the history of the European Union is the adoption of the European Single Act, signed in February 1986. The act, which included approximately 270 steps, inherently created the European Parliament and Commission. These are the two governing bodies overseeing the convergence of the European economies and the need to limit fluctuations in terms of exchange rates of these countries (Fontaine). However, it was not until 1992 that Europe could celebrate its most important achievement yet—the Treaty of Maastricht, paving the way for the creation of the Euro.

3.1 The Creation of an Entrance Exam for Eurozone Candidates – "Maastrict Criteria"

In his book *Understanding the Euro*, Christian Chabot summarizes the convergence criteria, also known as the "Maastricht criteria," which were established when EU members met to draft the "Treaty on European Union" in Maastricht, Netherlands on February 2nd 1992. However, before a country can even consider itself to be tested for these criteria, the first and foremost requirement is that it must be a member of the European Union, which mandates requirements such as the removal of trade barriers and tariffs, the removal of passport controls and customs streamlining. Moreover, EU members have to

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15 The Bretton Wood Agreements were signed by 44 Allied nations in July 1944 and came into operations at the beginning of 1945. The International Monetary Fund and the International Bank for Reconstruction and Development were created as a result. Further, another chief feature of the agreements was that each member country would adopt a monetary currency so that its exchange rate would be tied to the U.S Dollar, hence the term "Bretton Wood system." The system official ended in 1971 when the U.S, under President Nixon, severed the Dollar tie to the gold, and the Dollar became a "fiat currency."

be willing to sacrifice a limited amount of political authority to an independent overarching organization.[16] Once a country becomes a member of the European Union, it may consider joining the EMU. In order to do so, it must meet a number of economic conditions known as the "Maastricht criteria." These criteria require EMU candidates to achieve stability and convergence according to:

1. Price level (inflation)

2. Government budget deficit

3. Total government debt

4. Interest rates

5. Exchange rate

The first criterion, price stability, requires that candidate countries have an inflation rate, based on the country's Consumer Price Index-CPI, of no more than 1.5% above the average of the three Euro candidates with the lowest inflation (Chabot). In May of 1998, this latter number was calculated as 2.7%. Below are the 1991, 1997 and spring of 1998 inflation numbers of the first eleven members of the EMU:

	1991	1997	1998
Belgium	3.2%	1.5%	1.4%
Germany	3.5%	1.5%	1.4%
Spain	5.9%	1.9%	1.8%
France	3.2%	1.3%	1.2%
Ireland	3.2%	1.2%	1.2%
Italy	6.3%	1.9%	1.8%
Luxembourg	3.1%	1.4%	1.4%
Netherlands	3.1%	1.9%	1.8%
Austria	3.3%	1.2%	1.1%
Portugal	10.9%	1.9%	1.8%
Finland	4.1%	1.3%	1.3%
Greece**	19.5%	5.4%	5.2%

[17]

Figure 1. Extracted from Table A, European Convergence Report 1998 (EMI)

16 Chabot, Christian N. Understanding the Euro. New York: McGraw- Hill, 1999.
17 Euromonitor International. Passport GMID. 2011.
** Greece was not an original member but added for comparative purposes

All the original members passed this first hurdle by 1998.

The second criterion refers to the government budget deficit. Candidate countries must have a ratio of government budget deficit of no more than 3% of GDP (Chabot). Exceptions were only granted if any of the member hopefuls showed a substantial reduction of the budget deficit level towards the target. In the spring of 1991, 1997 and 1998, the figures from the eleven members were:

	1991	1997	1998
Belgium	-*	-1.7%	-1.7%
Germany	-2.90%	-2.7%	-2.5%
Spain	-4.33%	-2.6%	-2.2%
France	-2.92%	-3.0%	-2.9%
Ireland	-2.84%	0.9%	1.1%
Italy	-11.38%	-2.7%	-2.5%
Luxembourg	-*	1.7%	1.0%
Netherlands	-*	-1.4%	-1.6%
Austria	-2.93%	-2.5%	-2.3%
Portugal	-7.79%	-2.5%	-2.2%
Finland	-0.54%	-0.9%	0.3%
Greece	-10.14%	-4.0%	-2.2%

Figure 2. (-) indicates a budget deficit, extracted from Table A, European Convergence Report 1998 (EMI)

Again, all the original members' budget deficit level satisfied the required level by 1998. It is worth noting that France was in the "penalty area" in 1997, but was successful in reducing its budget deficit the following year.

The next criterion states that candidate countries must have a level of government debt no greater than 60% of GDP, unless this figure has been on a consistent decline and is close to 60%. In the spring of 1998, the eleven members' gross government debt to GDP stood at:

	1991	1997	1998
Belgium	127.2%	122.2%	118.1%
Germany	39.5%	61.3%	61.2%
Spain	43.8%	68.8%	67.4%
France	36%	58%	58.1%
Ireland	93.4%	66.3%	59.5%
Italy	98%	121.6%	118.1%
Luxembourg	-*	6.7%	7.1%
Netherlands	76.6%	72.1%	70.0%
Austria	56.8%	66.1%	64.7%
Portugal	61%	62%	60.0%
Finland	21.9%	55.8%	53.6%
Greece	73.2%	108.7%	107.7% [18]

Figure 3. Extracted from Table A, European Convergence Report 1998 (EMI)

Evidently, the table above shows that seven out of the eleven original members did not meet the requirement. These supposedly "blacklisted" countries included Belgium, Germany, Spain, Italy, the Netherlands, Austria and Portugal. Fortunately, the Maastricht Treaty added a clause that states, "... if the debt ratio exceeds 60%, it should 'diminish sufficiently and approach the reference value (60%) at a satisfactory pace," as mentioned in Professor Paul De Grauwe's column "The Politics of the Maastricht Convergence Criteria".[19] In this column, he complains that this ambiguous clause allows countries to bypass this important test. Also, the table indicates that many country members showed signs of diminishing government debt.

The fourth criterion requires that the Euro hopefuls must have a nominal interest rate on long-term government bonds of no more than 2% above that of the three EU members with the lowest such rate (Chabot). In May of 1998, this rate was 7.8%, and in the spring of 1991, 1997 and 1998, the eleven members' rates were:

18 Euromonitor International. Passport GMID. 2011.
* No Data Available
19 De Grauwe, Paul. The politics of the Maastricht convergence criteria. 15 April 2009.

	1991	1997	1998
Belgium	12.9%	5.8%	5.7%
Germany	12.5%	5.6%	5.6%
Spain	14.4%	6.4%	6.3%
France	10.2%	5.6%	5.5%
Ireland	10.6%	6.3%	6.2%
Italy	14.7%	6.9%	6.7%
Luxembourg	8.3%	5.6%	5.6%
Netherlands	12.4%	5.6%	5.5%
Austria	-	5.7%	5.6%
Portugal	25%	6.4%	6.2%
Finland	11.8%	6.0%	5.9%
Greece	29.5%	9.9%	9.8%	[20]

Figure 4. Extracted from Table A, European Convergence Report 1998 (EMI 25)

For this criterion, all the original members satisfied the requirement by 1998.

The last criterion relates to the countries' exchange rates, which includes the terms that the countries must be members of the European Monetary System and follow the exchange-rate mechanism known as ERM II (Chabot). A currency in ERM II is allowed to float within a range of ±15% with respect to a central rate against the Euro.[21]

3.2 Why did the EMU Establish These Criteria?

According to Chabot, the EU created these five convergence criteria in order for:

1. Any country that wishes to join the EMU to be fiscally responsible
2. EMU candidates to have converged economically and therefore allow a smooth transition into a single currency

This logic is supported by Professor Panos Afxentious of the University of Calgary, when he expresses that the three convergence criteria—inflation, interest and exchange rate—are designed to ensure monetary stability by supporting a fixed exchange rate regime among member countries. Meanwhile, the stability of the Euro is supported by the other two criteria—the government budget deficit and public debt. The purpose of this set of rules is simply to protect the European Union from threats of inflation, which may arise from

20 Euromonitor International. Passport GMID. 2011.
21 European Commission. "What is ERM II?" 20 October 2010. Economic and Financial Affairs. 22 September 2011 <http://ec.Europa.eu/economy_finance/Euro/adoption/erm2/index_en.htm>.

government budget deficits, as a result of reckless spending.[22]

3.3 How did the Eurozone Hopefuls Pass this Test?

Apparently, at the time that the "Treaty of Maastricht" was signed, many EU members could not meet the strict requirements. Thus, after 1992, these countries implemented ambitious programs to meet these prerequisites and convinced the European Commission that they would be ready to join the common currency area. As a result, many countries implemented tough austerity programs in order to show their willingness upon meeting the Maastricht requirements. In Italy, the government created a one-off 12-trillion-lira tax in an attempt to have a meaningful impact on its budget deficit, which they called "the Euro tax." In France, the government increased corporate and value-added tax rates on the largest companies. In Finland, the government reduced more than 45 billion markka worth of government budget spending between 1991 and 1996 (Chabot).

Besides these legitimate austerity programs, some countries were involved in questionable practices. In France, for example, the government changed the accounting rules for France Télécom's pension fund, moving 37.5 billion francs into the government budget. In the book *US Pension Reform: Lessons from Other Countries*, Baily and Kirkegaard confirm the way that both the French government as well as the involved corporations took advantage of the arbitrage in accounting standards:

> Corporate accounting standards ... generally require that publicly listed companies actuarially estimate the size of their implicit liabilities related to defined benefit pension systems and set aside sufficient reserves to meet these obligations. On the other hand, the System of National Accounts (SNA) ... demands only that government recognizes the liabilities of fully funded pension schemes ... In addition, the SNA does not require estimation or publication of the liabilities of public pension plan for the general public ... This transparency differential between corporate and public pension accounting rules allowed the French government to accept a lump-sum payment from newly privatized entities such as EDF [Électricité de France] in return for transferring their employee pension liabilities from the company balance sheet ... to the French government-run National Old Age Insurance Fund (Caisse nationale d'assurance vieillese, or

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22 Afxentious, Panos. "Convergence,the Maastricht Criteria, and Their Benefits." The Brown Journal of World Affairs (2000): 245-254.

CNAV), which requires no reporting of these liabilities.[23]

Undoubtedly, the opacity of the accounting standards used in Europe at that time allowed both parties to take advantage and serve each own purpose. Clearly, this is only one of the many examples that happened as governments inclined to execute many creative tactics to keep their budgets and other economic measurements in place. Regarding these approaches, Professor De Grauwe complained:

> In other cases (Belgium, France, Italy), "creative accounting" permitted these countries to hide the true level of the budget deficits. For example, these countries [including France as an example I described above] took over pension funds of state companies and booked the assets of these funds as current revenues while failing to book the future additional pension liabilities. As a result, the budget deficits were artificially and temporarily lowered. All this occurred while the European Commission gave its stamp of approval. It is no exaggeration to conclude that the budget deficit numbers were falsified, thereby allowing countries like Belgium, France, Italy and Greece to obtain free passage into the Eurozone.[24]

Unfortunately, from the beginning, the existence of accounting fraud has already taken place, as demonstrated in Professor De Grauwe's testimony. The question remains if the Euros first-adopters did not rush towards the "finish line", and in effect not allowing their economies to durably meet the convergence criteria, would we see a debt crisis that the current EMU is struggling to resolve today?

3.4 The Stability and Growth Pact

In order to strictly enforce these criteria and to make sure that all members remained fiscally responsible, the Euro candidates then went on to implement the "Stability and Growth Pact" in Dublin in 1996. The most important feature of the Pact is the ability for the European Commission to fine countries that run a budget deficit exceeding 3% of GDP. The country was to be fined a non-interest deposit of 0.2% of its GDP, plus 0.1% of GDP for every percentage point of deficit beyond the 3% limit. Fortunately, the fine should not be larger than 0.5% of GDP. If the troubled country is not able to reduce its budget

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23 Baily, Martin and Jacob Kirkegaard. US Pension Reform: Lessons from Other Countries. Washington, DC: Peter G. Peterson Institute for International Economics, 2009.

24 De Grauwe, Paul. The politics of the Maastricht convergence criteria. 15 April 2009.

deficit to the required limit, the European Commission would fine that country and distribute the proceeds amongst other members. The only exception is when a country is in a recession. Regarding this agreement, Professor Antonio Martino of the Cato Institute criticizes:

> The fiscal constraints introduced with the new currency must be criticized not because they are undesirable—in my view they are a necessary component of a liberal order—but because they are ineffective. This is amply evidenced by the "creative accounting" gimmickry used by many countries to achieve the required deficit to GDP ratio of 3 percent, and by the immediate abandonment of fiscal prudence by some countries as soon as they were included in the Euro club. Also, the Stability Pact has been watered down at the request of Germany and France. (Martino)

What Professor Martino tries to point out here is that the Pact is fundamentally essential to the stability of the EMU, but its structure and application is seen as undesirable. The number one problem with the Pact is perhaps its execution, because since its establishment, no penalties have been applied under any circumstances. This is because the sanctions will be determined by the number of votes in the Council of Ministers, which is often manipulated by large countries, such as France and Germany, as they themselves broke the threshold.

After examining the Maastricht criteria and seeing how each country actually dealt with the challenges of passing this arduous entrance test, it can be concluded that more often than not, some countries, in their haste to join the Euro, compromised the future stability and growth of their economies to adopt the Euro. The use of "creative accounting" was abused by multiple countries, and consequences of this approach are evident. Many papers had different perspectives regarding the economic effects of an austerity measure, but one suggests that a social destabilization is a consequence:

> We demonstrate that the general pattern of association between unrest and budget cuts holds in Europe for the period 1919-2009. It can be found in almost all sub-periods, and for all types of unrest. Strikingly, where we can trace the cause of each incident (during the period 1980-95), we can show that only austerity-inspired demonstrations respond to budget cuts in the time series.[25]

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25 Ponticelli, Jacopo and Voth, Hans-Joachim. Austerity and Anarchy: Budget cuts and Social Unrest in Europe, 1919-2009. Discussion Paper. London: Centre for Economic Policy Research, 2011.

Ironically, there is evidence that once some countries became members, they did not bother to prioritize reducing the public debt or tackle the excess in budget deficit, but instead, focused on maximizing growth. **Figure 5** in the following section shows us that with the objective above in mind, member countries tended to finance their growth through accumulating more debt. Undoubtedly, there is an invaluable set of lessons that can be learned from the various ways the Euro was adopted:

> • Some countries had put pressure on themselves to reach the goal on time. It would have been a better idea for these countries to take more time and join later, as seen in the case of the seven original members whose debt to GDP was much higher than the 60% bench mark;
> • Some countries took advantage of illegitimate measures in order to bypass the Maastricht criteria, for example, France, Belgium and Italy;
> • The European Commission lagged in declining countries' entrance into the EMU, thus creating future burdens on the Union as a whole. Greece is certainly an example of this case.

3.5 The First 10 Years of the EMU

There is no doubt regarding the early success of the EMU, just as many political leaders expected when they signed the Treaty of Maastricht in 1992. The Euro quickly flourished since its adoption and became the second largest reserve currency in the world and was even at the helm of challenging the dominant position of the US dollar.[26] Inter-regional trade not only increased significantly but also consolidated the European Union as the second most valuable trade region in the world, after NAFTA (North American Free Trade Association). Other countries decided to join in and gave up their own currency in order to adopt the Euro. These countries include Cyprus, Malta, Slovakia, Slovenia, Greece and most recently, Estonia.

However, successes rarely come without a cost. Presented below is the most recent data regarding the level of public debt to GDP:

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26 Aristovnik, Aleksander and Cec, Tanja. "Compositional Analysis of Foreign Currency Reserves in the 1999-2007 Period : The Euro vs. The Dollar as Leading Reserve Currency." Paper. 2009.

	2010
Austria	69.8%
Belgium	96.65%
Finland	48.4%
France	84.8%
Germany	80.0%
Ireland	94.9%
Italy	119.0%
Luxembourg	16.5%
Netherlands	63.9%
Portugal	83.4%
Spain	60.1%
Greece	141.9%

Figure 5. Source: Euromonitor[27]

Certainly, not only did the number of countries fail to meet the target criterion regulated by the Treaty of Maastricht increase, but their levels of debt significantly amplified over the period. As seen from the table above, eight out of the original eleven members had their debt exceed the 60% benchmark. Only Finland and Luxembourg's government debt levels were still below the required level. This convergence criterion was violated, but the cohesion measure in the form of a fine was never implemented. In addition, there are many other approaches attempting to explain what has gone wrong with the EMU model. A paper presented by Matthias M. Matthijs of American University criticized:

> The first explanation of the EMU sovereign debt crisis is Martin
> Feldstein's view (probably shared by Milton Friedman if he were still
> alive) that this was a crisis of institutional design. The EMU of the
> original twelve EU members that introduced the Euro in 2002 never
> was and never will be an optimum currency area (OCA), so they had
> it coming all along. No monetary union has ever survived without
> a fiscal union, which would be needed in the case of asymmetric
> shocks, and thus political union. Furthermore, there is insufficient
> business cycle convergence, too little labor market mobility in EMU,
> while product and labor markets remain relatively rigid in Southern
> Europe compared to Northern Europe.[28]

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27 Euromonitor International. Passport GMID. 2011.
28 Matthijs, Matthias M. Germany's Role in Crafting a Solution to the 2010 EMU Sovereign Debt Crisis:
     Persuading with Power or the Power of Persuasion? Paper. Boston: American University, 2011.

What Matthijs effectively points out is the central flaw in the EMU's institutional structure—the lack of a fiscal union. Other critics, including Phillip Bagus, attempt to explain the problems with the EMU by implementing the economic theory of the "tragedy of the commons." This theory states that one or more actors exploit a common resource while externalizing additional costs on others. A classic example of the "tragedy of the common" is the amount of fishes in the ocean. If a group of fishermen exploits this resource, there will be less and less fish if there is no intervention, and the consequence is that there will be a disaster for the environment. Similarly, using this theory, Bagus explains in his book "Tragedy of the Euro":

> The tragedy of the Euro is the incentive to incur higher deficits, issue government bonds, and make the whole Euro group burden the costs of irresponsible policies—in the form of the lower purchasing power of the Euro. With such incentives, politicians tend to run high deficits. Why pay for higher expenditures by raising unpopular taxes? Why not just issue bonds that will be purchased by the creation of new money, even if it ultimately increases prices in the whole of the EMU? Why not externalize the costs of government spending?[29]

The problem Bagus mentions is necessarily one of the major causes that led to the current crisis in Europe. For many European policy-makers, raising tax equals a politically suicidal decision, and thus, once they get hold of any other alternatives, they will surely take advantage. Furthermore, it is necessary to examine another divergence in terms of the cross-countries unemployment rate. As analyzed above, one of the strongest benefits a Common Currency Area model offers is the mobility of capital. However, after the global financial crisis, Spain's unemployment rate stubbornly remained approximately 20%, whereas most of the other European countries, like France, only surged to around 10%.

Despite the majority of similar labor policies in terms of unemployment benefits and wage bargaining, one research points out that the two countries differ greatly in terms of the employment protection legislation:

> Spain has a larger gap between the firing costs of workers with permanent and temporary contracts, and a much laxer regulation on the use of temporary contracts. We find that the combination of these two differences, labeled as the 'EPL gap' in what follows, could explain a sizeable fraction (45%) of the much higher rise of Spanish

29 Bagus, Phillip. The Tragedy of the Euro. Auburn, Alabama: Ludwig von Mises Institute, 2010.

unemployment.[30]

Thus, this finding shows that a need for a more fiscal discipline and a convergence of key economic policies (labor, taxation, pension and health) are vital to the survival and stability of the Euro. Thus, it is conclusive to say that the EMU model is flawed—this is unquestionable. However, a more relevant question has to do with the survival of the Euro, and what future regional integration model, such as the ASEAN, can learn to avoid a similar crisis.

V. The ASEAN

"ASEAN is obviously a very important association for us. Over the past 30 years ASEAN has made great strides in regional cooperation covering a number of areas, although recently it has been under strain because of the financial crisis and other challenges."

-Hassanal Bolkiah, Sultan of Brunei Darussalam

5.1 History and Politics of the ASEAN

Officially, the Association of Southeast Asian Nations came into existence in Bangkok, Thailand on August 8th 1967 with the signing of the ASEAN Declaration by the five founding fathers: Indonesia, Malaysia, the Philippines, Singapore and Thailand. Hence the name of the treaty is known as the "1967 Bangkok Declaration." However, the rest of the current members only joined in much later. Brunei Darussalam signed in 1984, Vietnam signed in 1995, Lao and Myanmar signed in 1997 and Cambodia signed in 1999. This progress makes up, in total, ten members today. According to its website, the ASEAN's main purposes of creation are:

- To accelerate the economic growth, social progress and cultural de velopment in the region through joint endeavours in the spirit of equality and partnership in order to strengthen the foundation for a prosperous and peaceful community of Southeast Asian Nations;
- To promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries of the region and adherence to the principles of the United Nations Charter;
- To promote active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scien

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30 Bentolila, Samuel, et al. "Why have Spanish and French unemployment rates differed so much during the Great Recession?" 22 January 2011. VOX: Research-based policy analysis and commentary from leading economists. 6 October 2011 <http://voxeu.org/index.php?q=node/6039>.

tific and administrative fields;

- To provide assistance to each other in the form of training and re
search facilities in the educational, professional, technical and admin
istrative spheres;
- To collaborate more effectively for the greater utilisation of their
agriculture and industries, the expansion of their trade, including the
study of the problems of international commodity trade, the improve
ment of their transportation and communications facilities and the
raising of the living standards of their peoples.[31]

Going over these purposes one by one, it is easy to identify a similarity
to the purpose of the creation of the European Union, as demonstrated in the
previous section. The two groups clearly were created with a common political
principle in mind—promoting regional peace. Conversely, the divergence in
terms of the political, economic systems and cultures is clearly far greater than
that of the European Union, as demonstrated in **Exhibit S**. With such a distinct
group, whether looking from a political, religious, legal or economic perspec-
tive, any type of regional cooperation is already a significant achievement. Not
surprisingly, prior to the 1967 Bangkok Declaration, several cross-countries
cooperation were short-lived.

The Southeast Asia Treaty organization (SEATO) (1954 -1960)

The Allied nations, including the U.S, France, the U.K, New Zealand,
Australia, Pakistan, the Philippines and Thailand formed SEATO in 1954 with
a sole purpose in mind—preventing the spread of Communism in the region.
Even though SEATO did not have any military force under its own discretion,
it acted as an organizer of joint-military exercises amongst member countries.
The group also acted as a legitimate source for the U.S's intervention in the
Vietnam War, since the Republic of Vietnam, or South Vietnam, was a member
of the group. SEATO ended in 1975, followed by the end of the Vietnam War,
with member countries sharing different perspectives regarding the War.[32]

The Association of Southeast Asia (ASA) (July 1961 - September 1963)

The ASA was founded in 1961 with only three members: Malaya, the
Philippines, and Thailand. It was seen as the first attempt by Southeast Asian
nations to create a regional cooperation. However, a dispute over territory
soon erupted between Indonesia, the Philippines and Malaysia. The territory

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31 ASEAN. The Official Website of the ASEAN. 2009. 6 October 2011 <http://www.asean.org/about_
    ASEAN.html>.
32 US Department of State. Southeast Asia Treaty Organization (SEATO), 1954. 6 October 2011 <http://
    history.state.gov/milestones/1953-1960/SEATO>.

was known as Sabah, which the United Kingdom promised its jurisdiction to Malaysia, but was not recognized by neither Indonesia nor the Philippines, which led to the collapse of the ASA.[33]

The Asian and Pacific Council (ASPAC) (1966 - 1973)

This organization was founded at a meeting in Seoul, South Korea in June of 1966. The members included Japan, Australia, New Zealand, Thailand, the Philippines, Malaysia, South Korea, South Vietnam, and Taiwan. Even though the official task was to hold consultation on economic, cultural and social questions, the group was widely seen as a political alliance against all the Socialist, Communist and social liberalization movements in other Asian countries. Because of this accusation, the group was dissolved in 1973.[34]

1967 Bangkok Declaration

Despite all the regional disputes and cultural, political as well as economic disparities, the five foreign ministers from Indonesia, Malaysia, the Philippines, Singapore and Thailand sat down in Bangkok, Thailand. These ASEAN founding fathers gathered to sign a historic document that later would be known as the ASEAN Declaration. Abad and Flores recalled the process:

> Yet it was by no means an easy process: each man brought into the deliberations a historical and political perspective that had no resemblance to that of any of the others. But with goodwill and good humor, as often as they huddled at the negotiating table, they finessed their way through their differences as they lined up their shots on the golf course and traded wisecracks on one another's game, a style of deliberation which would eventually become the ASEAN ministerial tradition.[35]

Behind the primary purpose of creating and maintaining a regional cooperation, Thanat Khoman, the Thai Foreign Minister, who signed the Declaration, pointed out the political motives behind the creation of the ASEAN in his article "ASEAN Conception and Evolution:"

> The most important of them was the fact that, with the withdrawal of the colonial powers, there would have been a power vacuum which could have attracted outsiders to step in for political gains. As the

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33 Khoman, Thanat. ASEAN Conception and Evolution. Bangkok, 1 September 1992.
34 Farlex. Asian and Pacific Council.
35 Flores, Jamil and Jun Abad. "The Founding of the ASEAN." 8 August 1997. ASEAN. 14 October 2011 <http://www.aseansec.org/7069.htm>.

colonial masters had discouraged any form of intra-regional contact, the idea of neighbors working together in a joint effort was thus to be encouraged. Secondly, as many of us knew from experience, especially with the Southeast Asia Treaty Organization or SEATO, co-operation among disparate members located in distant lands could be ineffective. We had therefore to strive to build co-operation among those who lived close to one another and shared common interests. Thirdly, the need to join forces became imperative for the Southeast Asian countries in order to be heard and to be effective. This was the truth that we sadly had to learn. The motivation for our efforts to band together was thus to strengthen our position and protect ourselves against Big Power rivalry.[36]

Thus, the foreign forces that left Southeast Asian countries in such disarray in the last century were also the ones that brought ASEAN into being.

5.2 Structure and Governance of the ASEAN

Figure 6 shows the organizational chart of the ASEAN. The most important bodies of the ASEAN consist of:[37]

a. **ASEAN Summit**: The ASEAN Summit consists of heads of states or governments of the member states and is seen as the highest body of the ASEAN. Held twice annually, the ASEAN Summit instructs and organizes the inter-Ministerial meetings, authorizes the establishment and dissolution of different Sectoral Ministerial Bodies, appoints the Secretary-General of the ASEAN, addresses any emergency situations affecting the ASEAN, and strengthens the objectives of the ASEAN.

b. **ASEAN Coordinating Council**: The ASEAN Coordinating Council consists of the foreign ministers of each member country and meets at least twice a year. The Council is expected to prepare for the ASEAN Summit and is responsible for drafting the proposed agreements, co-ordinate the reports of the ASEAN Community Council to the Summit, and approve the appointment and termination of the Deputy Secretaries-General.

c. **ASEAN Community Council**: Consisting of several sub-committees including the Political-Security Community Council, the Eco-

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36 Khoman, Thanat. ASEAN Conception and Evolution. Bangkok, 1 September 1992.

37 ASEAN. "ASEAN Charter." January 2009. aseansec.org. 19 October 2011 <http://www.aseansec.org/publications/ASEAN-Charter.pdf>.

nomic Community Council, and the Socio-Cultural Community Council, the ASEAN Community Council governs the relevant Sectoral- Ministerial Bodies. The Council is expected to meet at least twice a year and is expected to submit reports and recommendations to the ASEAN Summit.

d. **ASEAN Sectoral Ministerial Bodies**: This governing body is in charge of the execution of the policies agreed by the ASEAN Summit. Besides, it is also responsible for strengthening the collaboration amongst members in their respective fields and also submitting recommendations for the Summit.

e. **Secretary-General**: Elected with a non-renewable five-year term, and selected from among nationals of the ASEAN members based on alphabetical rotation, the Secretary-General acts as a Chief Administrative Officer, with responsibilities including facilitating and supervising progress on the agreements and decisions made at the Summit, compiling the annual report to be presented at the Summit, representing ASEAN with external governing bodies and finally, recommending the appointment and termination of the four Deputy Secretaries-General.
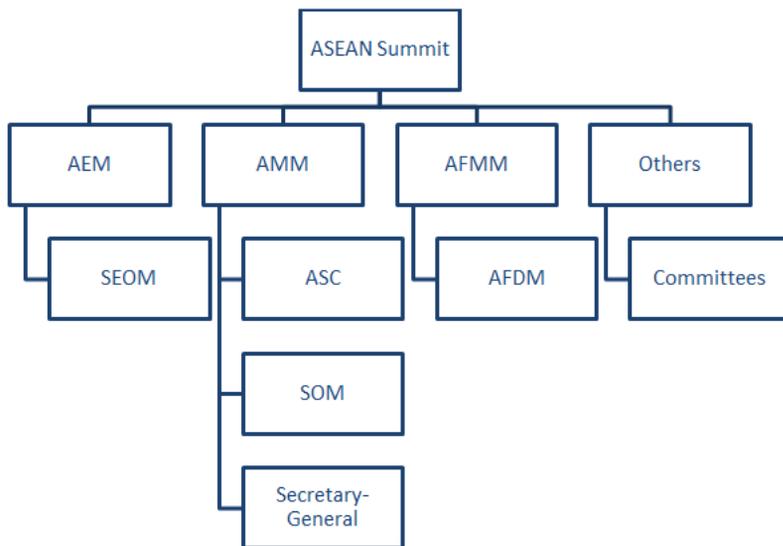
Figure 6. ASEAN Organizational Structure. Note: AEM – ASEAN Economic Ministers, AMM – ASEAN Ministerial Meeting, AFMM – ASEAN Finance Ministers Meeting, SEOM – Senior Economic Officials Meeting, ASC: ASEAN Standing Committee, SOM – Senior

Officials Meeting, AFDM: ASEAN Finance and Central Bank Deputies Meeting. Extracted based on the ASEAN Charter.

How is the ASEAN organization structure compared to that of the EU?

As arguably one of the most prominent regional organizations of the developing world, the ASEAN has been compared both economically or politically to the EU several times by many academic papers. Dr. Thanawat Pimoljinda of the Institute of International Studies at the Ramkhamhaeng University in Bangkok commented:

> However, it is obvious that, in the case of the EU, the delegating of national sovereignty to supranational authority could bring more effective policy decision-making at the regional level than retaining sovereignty at the national level, as in the case of the ASEAN. The supranational approach [that EU adopted] also fastens on the process of regional cooperation to achieve certain goals of organization other than those preferred in the intergovernmental approach [that the ASEAN preferred]. Undoubtedly, when member states prefer the supranational approach, national sovereignty is inevitably transferred to the regional level as a result.[38]

It is clear from the establishment of the ASEAN organizational structure that member countries prefer an informal way of cooperation to an EU-typed legally-binding standard. The reasons behind why the ASEAN members choose to approach their regional cooperation may be best understood by looking back at the level of suspicion and mistrust based on the historical and cultural differences amongst the members, as seen in Indonesia and Malaysia. Conversely, Europe underwent two devastating World Wars and there is a surprisingly concrete cooperation amongst European nations. One theory behind this may be due to the existence of the Cold War, with the Soviet bloc acted as an external threat to the safety of all Europe. This forced European countries to move swiftly and effectively towards a more integrated Europe, politically and economically.[39] Similarly, the recent dispute between China and several ASEAN members over what China claimed as "South China Sea" may in fact be an incentive for ASEAN members to bond together. Even though it is too early to make any conclusions, one should consider another factor that forms the ASEAN collaboration as of today—the 1976 Treaty of Amity and Cooperation, also known as "the ASEAN Way." The ASEAN way consists of

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38 Khoman, Thanat. ASEAN Conception and Evolution. Bangkok, 1 September 1992.
39 Interview with Professor Chartier.

the following five agreements:

1. Mutual respect for the independence, sovereignty, equality, territorial integrity, and national identity of all nations;
2. The right of every State to lead its national existence free from external interference, subversion or coercion;
3. Non-interference in the internal affairs of one another;
4. Settlement of differences or disputes by peaceful manner;
5. Renunciation of the threat or use of force; and Effective cooperation among themselves.[40]

Although coming from a reasonable background, the ASEAN Way may act as a hurdle in terms of the political cooperation amongst ASEAN members. Obviously, the decision-making processes in Europe, especially during the current financial crisis, would take much longer and undergo more pain if it were the ASEAN instead. For a common currency area to be established, the ASEAN Way must be significantly improved in a more formal manner.

5.3 Recent Developments

The ASEAN Free Trade Agreements (AFTA)

One of the most significant developments for the ASEAN is the signing of the ASEAN Free-Trade Agreements, or AFTA. Signed in 1992 in Singapore, the original members of the AFTA were Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. This group is known as the ASEAN-6. Vietnam, Laos, Myanmar and Cambodia joined in subsequent years. The primary objectives of the AFTA include the eliminations of tariffs, non-tariff barriers as well as attractions of foreign direct investments to ASEAN members. The latter would position the ASEAN as one of the primary manufacturing hubs in the world. In particular, the AFTA governs:

1. Facilitating transportation of goods in transit, to support the implementation of the ASEAN Free Trade Area, and to further integrate the region's economies
2. Simplifying and harmonizing transport, trade and customs regulations and requirements for the purpose of facilitation of goods in transit;
3. Establishing an effective, efficient, integrated and harmonized transit transport system in ASEAN.[41]

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40 ASEAN.
41 ASEAN. Agreement on the Common Effective Preferential Tariff Scheme for the ASEAN Free Trade Area. Agreement. Singapore, 1992.

Regarding the intra-regional tariffs, AFTA aims at reducing these trade barriers through the establishment of the Common Effective Preferential Tariff (CEPT) Scheme. This will ultimately reduce tariffs to the 0-5% on all manufacturing products. Most recently, 99% of the products in the CEPT list, except for highly sensitive category such as rice, of the ASEAN-6 have been reduced to the target tariff range. Conversely, the ASEAN did not limit their trade agreements to regional members. For the past decade, several trade agreements with other countries were swiftly established:

• ASEAN – Australia, New Zealand Free Trade Area
• ASEAN – China Free Trade Area
• ASEAN – India Free Trade Area
• ASEAN – Japan Free Trade Area
• ASEAN – Republic of Korea Free Trade Area

5.4 The ASEAN Founders and the Maastricht Criteria

Even though the ASEAN members are widely different economically and politically compared to their European counterparts, all the member countries are taking necessary initiatives to converge themselves towards a common market. Ong Keng Yong, the former secretary-general of the ASEAN, once wrote to the Asian Wall Street Journal in 2003:

> The AEC [ASEAN Economic Community] will be a single market and production base, characterized by the free movement of goods, services, investment, and capital by the year 2020. A roadmap for the integration of the financial sector forms part of the AEC process, which includes financial services and capital account liberalization, capital market development, and currency cooperation. The AEC will also facilitate the movement of businessmen, skilled labor, and talents within the region.[42]

Also, according to Mr. Keng Yong, thanks to the reduction of the tariff from 12.7% on average when AFTA was implemented in 1993, to 2.3% , the intra-regional trade went up from 10% to 25% (2003) of member countries' trade. With this level of cooperation in place, it is necessary to give the founding members of the ASEAN a "Maastricht entrance exam test" and see how

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42 Keng Yong, Ong. "Asean Moves Forward To Build a Single Market." The Wall Street Journal 9 October 2003.

the countries perform:

		2000	2010
Nominal Interest Rate	Indonesia	18.5%	13.3%
Target level: 7.43%	Malaysia	7.7%	5.0%
	Philippines	10.9%	7.7%
	Singapore	5.8%	5.4%
	Thailand	7.8%	5.9%
Inflation - % growth	Indonesia	3.7%	5.1%
Target level: 4.1%	Malaysia	1.5%	1.7%
	Philippines	4.0%	3.8%
	Singapore	1.4%	2.8%
	Thailand	1.6%	3.3%
Budget Deficit as % of GDP	Indonesia	-2.03%	-0.59%
Target level: No more than 3%	Malaysia	-4.45%	-5.06%
	Philippines	-4.47%	-3.66%
	Singapore	10.14%	5.36%
	Thailand	-1.77%	-2.64%
Public Debt as % of GDP	Indonesia	95.1%	26.9%
Target level: No more than 60%	Malaysia	35.3%	54.2%
	Philippines	62.1%	47.3%
	Singapore	82.6%	99.1%
	Thailand	57.0%	43.3%

Figure 7. Source: Euromonitor International. Passport GMID. 2011.

After examining the "Maastricht Criteria," it is clear that there is indeed a convergence trend for the ASEAN founders. First, regarding the nominal interest rate criterion, the required rate was calculated to be 7.43%. This was calcuated by adding 2% to the average of the three countries with the lowest interest rates. Only Indonesia and Phillipines exceeded this rate. Second, for the inflation rate, the required level was estimated to be 4.1%. Indonesia is the only country that exceeds this level. This rate was calculated by adding 1.5% to the average of the three countries with the lowest inflation rates. Third, the budget deficit must be no more than 3% of GDP, and only Malaysia and Phillipines are above this level. In the case of the Phillipines, it is only by a slight margin. As to the last criterion, the public debt as % of GDP, Singapore is the only country that breaches this threshold, with a level well above that of the Maastricht figure (60%). Nevertheless, like Germany, Singapore is often seen as the "economic locomotive" of the region. With a formidable balance sheet, as demonstrated by a budget surplus of 5.36%, and its position as one of the primary financial and transporation hubs of Asia, Singapore is definitely positioned to be a strong leader.

Still, Singapore is a unique case study. As one can tell from the chart, the country is running a healthy budget surplus of 5.36% in 2010, but the government is borrowing at approximately 100% of the country's GDP. This actually has to do with the way the country recognizes government borrowing as gross debt, not net debt. Regarding this difference, Professor Mukul Asher of the National University of Singapore commented: "The main limitation of the gross public debt indicator in assessing fiscal health is that it leaves out the Government's assets from past surpluses, and whatever funds that may have been set aside, as Singapore has done, to repay debt."[43] Regarding a solution to this confusing accounting practice, Professor Asher proposes that to truly assess the financial health of the country, net debt will be a better metric, because the result will register even a surplus in government debt instead (Asher).

5.5 Discussions over a Common Currency Area of the ASEAN

The European Union's bold move to establish a single currency has inspried and motivated ASEAN leaders and economists. But because of the hardship Europe is undergoing at the moment, a popular school of thought is that a single currency plan for the ASEAN is too ambitious and that the group is not yet ready for this integration at the moment. Similar to the European situation, an ASEAN single currency can destabilize because of a lack of fiscal discipline in each member country or a prompt solution to halt the systemic spread of risk from one country to another. Dradjad H. Wibowo, a senior economist at Sustainable Development Indonesia, comments: "A single currency poses severe prerequisites and consequences, which one of them is that all countries should have a high fiscal discipline as a consequence of transparency and accuracy of macroeconomic data including the monetary regime and trade rules."[44] Nevertheless, some ASEAN leaders still officialy show a strong support for this monetary integration and have built this into the development plan for the ASEAN. This is known as the "ASEAN Vision 2020." At a speech given at the University of Indonesia, Ong Keng Yong, the former Secretary General, points out that there are two areas that the ASEAN needs to improve upon, if indeed the region should pursue any further monetary integration. First, the intensity of the intra-regional trade amongst ASEAN members remains relatively small, though growing, with a majority of trade occuring with other external countries such as China and India (see **Exhibit B**). Second, with the level of economic disparity amongst ASEAN members, a greater convergence in macroeconomic conditions will improve confidence in a single cur-

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43 Asher, Mukul. "What Singapore public debt reveals." The Strait Times 17 June 2010.
44 Asworo, Oleh H. "Asean single currency is too ambitious, economists say." Bisnis Indonesia 10 October 2011.

rency plan. He also points out several initiatives that have taken place as part of the roadmap to "ASEAN Vision 2020:"[45]

I. **ASEAN Survelliance Process (ASP)**: After the financial crisis of 1997-98, finance ministers agreed to establish the ASP, which is a process consisting of two parts. The first is the monitoring of global, regional and national economic as well as financial developments. The aim is to track the recovery process and detect any vulnerable signs in ASEAN economies. The second part of the ASP provides a peer-review forum for the finance ministers to consider unilateral or collective action to an economic threat such as a global financial crisis to the region.

II. **The Chiang-Mai Initiative (CMI)**: There are two components of the CMI—an expanded ASEAN Currency Swap Arrangement and a network of bilateral swap arrangements amongst ASEAN members and ASEAN +3, which consists of China, Japan and Republic of Korea. The objective of the CMI is to provide liquidity for members which may suffer from a temporary balance-of-payments difficulties. As of 2004, sixteen bilateral swap arrangements totaling $35.5 billion were established. The CMI came into existence with the goal of avoiding a 1997 regional finance crisis type, due to short-term liquidity problems, by pooling significant foreign exchange reserves to help fight currency speculation—a threat that still scars many ASEAN members.

III. **Roadmap for the Integration of ASEAN in Finance**: Under the roadmap, important milestones have been established in crucial areas: capital market development, capital account and financial services liberalization as well as ASEAN currency cooperation. These three areas will involve numerous agreements and discussions in order to strengthen cross-border activities. Aiming at reducing demand and dependency on the US Dollar, the currency cooperation initiative would involve exploration of possible regional currency arrangements. This includes a currency payment system for trade in local goods and promotion of the regional currencies stability.[46] Here, it is important to assess the current capital

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45 Yong, Ong K. "Towards ASEAN Financial Integration." 18 Feburary 2004. ASEAN. 20 October 2011 <http://www.asean.org/16013.htm>.

46 Yong, Ong K. "Towards ASEAN Financial Integration." 18 Feburary 2004. ASEAN. 20 October 2011 <http://www.asean.org/16013.htm>.

account and financial services conditions of the ASEAN. **Figure 8** shows the capital flow index of the ASEAN members:
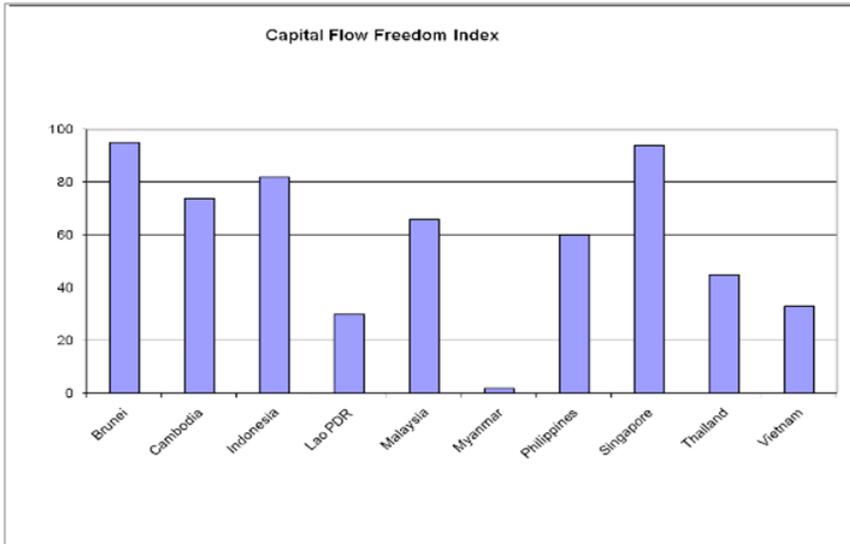
Figure 8. ASEAN Capital Flow Index (Park and Takagi)

It is important to note that Cambodia has a relatively high capital flow freedom given the economic development of the country. In fact, the country has a higher index than better-off countries, as measured by GDP, such as Thailand, Phillipines and Vietnam. A possible explanation for this is the severe weakness in the banking system and regulations due to the dependence on the US Dollar. Siphat Lim of the National Bank of Cambodia comments:

> After the election in 1993, Cambodia has changed from a planned economy to a free market economy. At the same time, Cambodia has become partially dollarized owning to the flood of $1.7 billion of U.S. dollar by the UNTAC [the United States Transitional Authority in Cambodia] and the weakness of banking system and regulation and especially hyperinflation. The foreign currency deposits increased from around 44 million of U.S. dollar in 1993 to $3,058 million of U.S. dollar in 2009. As reflected by this condition, the conduct of monetary policy by monetary authority—National Bank of Cambodia—is weak because the amount of cash U.S. dollar circulation outside banks is not known. In addition, lending as a last resort

cannot be carried out by the National Bank of Cambodia which lim-
its the ability of central bank to influence interest rate in the market.[47]

Yung Chul Park of the Korea University and Shinji Takagi of the Osaka
University at a research meeting in New Delhi pointed out that the capital ac-
count regime in the ASEAN can basically be summarized in seven points:

1. Many retain restrictions on capital flows.
2. Controls are tighter on outflows than on inflows.
3. All except Myanmar have accepted IMF Article VIII,[48] but many
    keep current account-related restrictions, for example, repatriation
    requirements and payment formalities.
4. Almost all restrict offshore use of their currencies.
5. Many place more restrictions on external borrowing than portfolio in
    flows; many, including Singapore, restrict external lending.
6. Many restrict the ability of investors to hedge risks.
7. Some impose withholding tax on interest income and capital gains
    from certain types of securities.[49]

The author also notes that in order to establish an ASEAN Economic
Community by 2015, which represents, " … a region with free movement of
goods, services, investments, skilled labor, and freer flow of capital" (ASE-
AN), the members need to carefully implement the ASEAN Strategic Sched-
ule, with some of the highlights reprinted in Exhibit E.

IV. **The ASEAN Exchanges**: The "ASEAN Exchanges" is a vision that
all regional stock exchanges will one day be integrated into one. Cur-
rently, the ASEAN Exchanges comprise of seven stock exchanges:
Bursa Malaysia, Hanoi Stock Exchange, Ho Chi Minh City Stock Ex-
change, Indonesia Stock Exchange, the Philippine Stock Exchange,
the Stock Exchange of Thailand and the Singapore Exchange. To-
gether, the ASEAN Exchanges currently have 3,613 companaies
listed with a combined market capitalization of approximately $1.98

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47 Lim, Siphat. Capital Control and Dollarization in Cambodia. National Bank of Cambodia. Knompenh,
    Cambodia: National Bank of Cambodia, 2011.
48 Under Article VIII, Sections 2, 3 and 4, IMF members undertake not to impose restrictions on the
    making of payments and transfers for current international transactions, and not to engage in, or
    permit any of their fiscal agencies to engage in, any discriminatory currency arrangement or multiple
    currency practice, except with IMF approval. (IMF)
49 Park, Yung C. and Shinji Takagi. "Creating an Integrated Market by 2015: Capital Account
    Liberalization in ASEAN." 15 March 2011. Nipfp.org. 26 October 2011 <http://macrofinance.nipfp.
    org.in/PDF/17_8sl_Takagi_presentation_at_NIPFP-DEA_Delhi3-7-11.pdf>.

trillion.[50] This integration is widely believed to capture more foreign investors' attention to the region by introducing the blue-chips from all the stock exchanges to the world. Clearly, evidences of economic integration in the ASEAN are increasing.

VI. Statistical Methodologies

So far, the history and political similarties and differences between the EMU and the ASEAN have been examined. Nevertheless, there is still not enough evidence to conclude if the ASEAN is indeed converging to a common currency, or that the five founding members have synchronized their economic activities. Thus, in order to identify any convergence evidence amongst the five founding members of the ASEAN, three different statistical methodologies are used. The first examines the levels of trade amongst these five countries, using the descriptive statistictical approach, as the increase in trade is among the primary reasons behind the legitimacy of a common currency convergence. The other two are Ordinary Least Square regression (OLS) and Granger Causality. The variables used for these three models are also used to test if a country member is eligible for the EMU, as agreed by the Treaty of Maatstricht—the landmark document that created the Euro (see **Section IV**). Regarding the descriptive model, the variables used are the values of exports, imports and Gross Domestic Products. The variables used for OLS and Granger Causality are the nominal interest rates, inflation, budget deficits (surpluses) and exchange rates of the five countries.[51] They are chosen primarily based on their interrelationships of the national monetary policies and the level of fiscal responsibilities of each government. All variables span across a period of time beginning in 1980 to the most recent data recorded, which is 2011.[52]

6.1 Descriptive Statistics (see Exhibit F - J)

The Descriptive Statistics models serve as a comparison purpose in order to examine the levels of trade in the chosen group of the ASEAN members. The variables used in these models are exports, imports and GDP. The percentage of exports and imports to GDP will determine how important the status of a trading partner is to each of the five ASEAN founders. In this section, each country will be examined one by one during the decades from 1980 to 1990, 1991 to 2000 and from 2001 to 2011. After examining the descriptive statistic model, it is clear that Singapore is an important trading partner to the

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50 ASEAN Exchanges. "ASEAN Exchanges." 2011. <http://www.aseanexchanges.org/Default.aspx>.

51 The public debt as a percentage of GDP criterion is not used as there are not enough observations (data) for the models to be valid.

52 All data points are collected from the Euromonitor International Database, extracted from the International Monetary Fund Statistics.

other four countries. Looking at **Exhibit F** through **Exhibit J**, this finding is proven whereas average imports from and average exports to Singapore increase over the three periods for all countries, except Thailand. Nevertheless, average exports to Singapore still account for 3.82% of Thailand's GDP during the 2001 and 2011 period, which is the highest compared to the other three trading partners. Among these five countries, the most meaningful trading pair is Singapore and Malaysia. For Malaysia, the level of export to Singapore accounts for 17.91% of total exports, while the level of imports to Singapore accounts for 14.07% of total imports. This finding is significant also because Singapore's main exports consist of machinery, electronics equipment, pharmaceuticals, chemicals, and mineral fuels. These are all capital goods and raw materials vital to the growth model of any emerging markets. However, as mentioned in previous sections, this region's intertrade level needs to increase, as external trade is still more significant.

6.2 Ordinary Least Square Regression (see Exhibit K)

The OLS is among the most popular regression model. Regression can be defined as, "A way of defining the extent to which two variables are related … The existence of a correlation between variables does not always mean that there is a cause-and-effect link between them."[53] The purpose of the OLS model in this paper is to assess the level of convergence among the five founding members and is implemented by choosing each country's variable and testing it against the other countries' same variable. The results will determine how closely related one country is to another based on that economic variable. Specficially, an OLS model seeks to find a relationship between one country, for example Malaysia, and the other four countries. If there is any indications that Malaysia indeed has evidence of convergence, as determined by two statistical measurements, the t-value and p-value, then it can be concluded that there is proof of synchronization. It will be helpful to analyze a specific example to understand this approach (see **Exhibit K** for a detailed walk-through). The OLS model spans from 1980 to 2011. One should first note that for the convenient purpose of this practice, the countries' names are coded as following:

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53 Gibilisco, Stan. Statistics Demystified. New York: McGraw-Hill, 2004. Print.

Indonesia	Ind
Malaysia	Mal
Philippines	Phi
Singapore	Sin
Thailand	Tha

   The results from all the OLS Regression models point to the following conclusions:

- **Budget Deficit (Surplus)**: There seems to be significant relationships in terms of the budget balances between Indonesia and Malaysia, Indonesia and Thailand and Malaysia and Philippines.[54] The results also show that Singapore does not seem to have any significant relationship with the other countries. The table below summarizes the findings (**Exhibit K**):

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	√	X	X	√
Malaysia	√	-	√	X	X
Philippines	X	√	-	X	X
Singapore	X	X	X	-	X
Thailand	√	X	X	X	-

√: indicates significant relationship
X : indicates insignificant relationship

- **Exchange Rates**: There appears to be significant relationships in the exchange rates, which are converted on a per dollar basis for comparative purposes, between the following currency pairs: Indonesia-Malaysia, Malaysia-Thailand, Singapore-Philippines and Thailand-Philippines. However, the Singapore and Philippines currenncy pair stands out as the result suggests the exchange rates in these two countries are negatively correlated with each other. The table below summarizes the findings (**Exhibit L**):

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54 Initially, the relationship between Indonesia and Phillippines, though negatively correlated, seems to be significant, but after dropping the other insignificant variables, the result points out that this pair is not significant enough to be taken into consideration.

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	√	X	X	X
Malaysia	√	-	X	X	X
Philippines	X	X	-	√	√
Singapore	X	X	√	-	X
Thailand	X	√	√	X	-

√: indicates significant relationship
X : indicates insignificant relationship

- **Inflation**: There are only evidences of strong relationships between the pairs of Malaysia-Singapore and Singapore-Thailand. The table below summarizes the results (**Exhibit M**):

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	X	X	X	X
Malaysia	X	-	X	√	X
Philippines	X	X	-	X	X
Singapore	X	√	X	-	√
Thailand	X	X	X	√	-

√: indicates significant relationship
X : indicates insignificant relationship

- **Interest Rates**: Thailand is the country that stands out in this criterion as there are evidences of significant relationships between Thailand and Malaysia, Philippines and Singapore. Another pair that is worth-examined is Indonesia and Malaysia. The table below summarizes the results (**Exhibit N**):

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	X	X	X	X
Malaysia	√	-	X	X	√
Philippines	X	X	-	X	√
Singapore	X	X	X	-	√
Thailand	X	√	√	√	-

√: indicates significant relationship
X : indicates insignificant relationship

In conclusion, the results from the OLS models suggest the five ASEAN founders do not have strong interrelationships as a whole. However, the model also points out some notable trading pairs. The most important of which is the one between Indonesia and Malaysia.

6.3 Granger Causality

The nature of an OLS model (see **Exhibit K**) can only suggest a correlation amongst variables, and correlation does not imply causation. In effect, another statistical model is necessary to not only show the correlations, but also the directions of these relationships. This is the reason why an alternative model is necessary. Granger Causality is suitable to help achieve this purpose, as understanding the causes and effects of the variables and the direction of the relationship is crucial to this paper. Typically, Granger Causality model implies short-term relationships, while OLS implies long-term relationship. The most important finding based on this model is the inflation criterion, as there are multiple evidences of significant relationships in this particular area. The results of all the Granger Causality model are summarized as following:

- **Inflation**: The Granger Causality Inflation models are exceptional as they suggest strong relationships and influences among all five countries. For example, Indonesia's inflation has a significant relationship with that of Malaysia, Philippines, Singapore and Thailand. This means when Indonesia's inflation increases or decreases, the inflation rates in the other four countries will likely be affected as well. The table belows summarizes the results (see **Exhibit Q**):

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	√	√	√*	√
Malaysia	√	-	X	√	X
Philippines	√	X	-	√	√*
Singapore	√*	√	√	-	√
Thailand	√	X	√*	√	-

√: indicates significant relationship
X : indicates insignificant relationship
*A relationship that is negative correlated

- **Budget Surplus (Deficit)**: It can be implied from the models the current account balance of Indonesia influences that of Malaysia, while the current account balance of Philippines influences that of Thailand, and vice versa. Singapore does not Granger Cause any other countries. (see Exhibit O)
- **Exchange Rates**: The models suggest the Indonesian Rupiah influences the directions of the Malaysian Ringgit and the Thai Baht, while the Singaporean Dollar also influences the Thai Baht, and vice versa. This suggests a strong relationship amongst the mentioned countries in terms of

their currency directions. The Philippine Peso does not Granger Cause any other currencies. (see Exhibit P)
- **Interest Rates**: The Granger Cause models for this criterion suggest that the Thailand interest rates influence those of Malaysia and Singapore, and vice versa. Also, the Philippines interest rates also influence the Singaporean counterparts and vice versa. (see Exhibit R)

In conclusion, similar to the results with the OLS model, the GC model suggests the five founding members as a whole have not demonstrated a strong evidence of convergence. In other words, there are certain evidences with specific macroeconomic variables, but there is still relatively weak sign of economic integration according to the models. Nevertheless, even though integration as a group is not as strong yet, the five ASEAN founding members still exhibit increasing evidence of integration, as demonstrated by many trading pairs and their significant relationships.

VII. Conclusion

Since its creation in 1967, the ASEAN has faced many challenges and opportunities. Together, they survived the 1997 Asian economic crisis that, looking back, still horrifies many countries. Usually, economic crises lead to political unrest and upheaval. The resignation of the Thai Prime Minister Chavalit Yongchaiyudh in 1997 and Indonesian President Suharto in 1998 are good examples. The following table summarizes the difficulties the ASEAN founders had to face during the crisis:

Countries	1997	1998	Percentage change in GDP
Indonesia	215,748.7	95,445.5	-55.76%
Malaysia	100,169.2	72,175.2	-27.95%
Philippines	91,233.6	72,207.0	-20.85%
Singapore	95,864.8	82,398.4	-14.05%
Thailand	150,891.6	111,859.7	-25.87%

In mn $. Source: Euromonitor International from the International Monetary Fund.

As for any major economic crisis, the causes are often numerous and complicated. However, the spark began when Thailand ran out of the foreign currency reserves and was forced to abandon the Thai Baht's peg against the dollar. As a result, the Chiang-Mai Initiative of 2000, which established the ASEAN Currency Swap Arrangement, was created to prevent a similar future occurrence. Likewise, more and more initiatives aiming at promoting ASEAN integration are underway, with two important milestones—the establishment

of the AEC (ASEAN Economic Community) by 2015 and "ASEAN Vision 2020." Besides, as analyzed in section V, even with the strict criteria of the Treaty of Maastricht established by the European Monetary Union, the ASEAN is capable of passing most criteria. In addition, a much anticipated development is the integration of all regional stock exchanges by 2015.

However, the conclusion drawn from the political and economic assessment as well as the statistical results of this paper strongly suggest that ASEAN is not ready for a viable common currency. Currently, the structure of ASEAN itself supports an informal type of cooperation, with the establishment of the ASEAN Summit being the supreme policy-maker. Moreover, the 1976 Treaty of Amity and Cooperation, also known as the "ASEAN Way," which encourages national sovereignty and non-interference policies over further political union.

In *Wealth by Association: Global Prosperity Through Market Unification*, Professor Edmunds and Marthinsen establish seven different stages that a regional union should follow on the path to a total economic integration. The steps are Preferential Trading Agreement, Free Trade Area, Custom Union, Common Market, Monetary Union, Economic Union and Political Union:
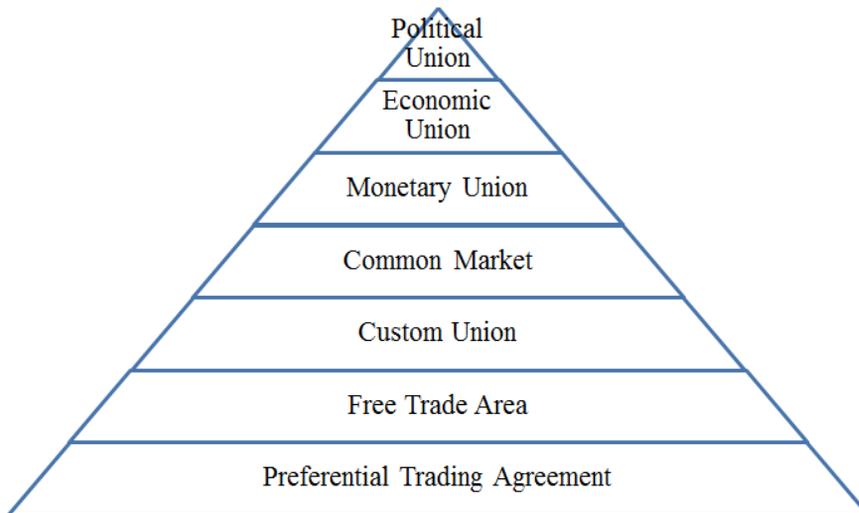
Source: Edmunds, John and Marthinsen, John. 2003.

Currently, the ASEAN is at the Custom Union level. The authors define a "Custom Union" as, "[a stage that] has all the features of a free trade area but goes one step further by requiring member nations to agree on a uniform level

of protection relative to nonmember countries."[55] With the establishment of many bilateral free-trade agreements betweeen the ASEAN and many external partners, it is clear the group is now at the Custom Union stage.

The next step, according to Edmunds and Marthinsen, is to establish a Common Market, which is defined as followed:

> [A Common Market] Has all the features of a custom union and it also opens the borders of member nations to the free, intra-union flow of labor and capital. Citizens of nations belonging to a common market should enjoy the same rights and benefits as resident nationals. Moreover, intra-union capital market transactions and money market transactions should be treated in a nondiscriminatory manner. (Edmunds and Marthinsen)

The best example of a Common Market so far is undoubtedly the European Common Market. The "ASEAN Vision 2020" plan is undoubtedly trying to follow this path, as currently, the ASEAN is far from achieving the status of a Common Market. This is simply because the flow of capital, labor and goods in the region is still constrained, due to the skeptical views as a result of the "ASEAN Way." Beyond this stage, the three most advanced forms of economic integration are monetary union, economic union and political union. Essentially, according to Edmunds and Marthinsen, a monetary union is one that, "Has all the features of a common market but adds a supranational authority responsible for conducting monetary policy" (Edmunds and Marthinsen). The European Monetary Union is again clearly a pioneering model of a monetary union. Unfortunately, the application of the monetary union model in Europe is fundamentally flawed and as a result, Europe is currently undergoing a widespread crisis. The main reason is due to a failure to abide by the strict criteria that were established in the 1992 Treaty of Maastricht. Moreover, the European experience shows that a monetary union cannot be sustainable without a fiscal union. Specifically, a fiscal union equips a monetary union with swifter and more powerful policies in response to an external shock—a view also shared by Edmunds and Marthinsen:

> Monetary unions have a greater chance for success if there is a supranational fiscal authority with significant power to tax and spend according to the needs and priorities of the union as a whole and an ability to temporarily offset economic hardship … In that way, the

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55 Edmunds, John and Marthinsen, John. Wealth by Association: Global Prosperity Through Market Unification. Westport, CT: Praeger, 2003.

> supranational fiscal authority responds to regional disparities and thus does not need to obey the dictates of individual member countries. (Edmunds and Marthinsen)

Indeed, Europe promoted a monetary union before fully developing an economic union. The ASEAN, as an emerging political and economic power of the world, must study all these pioneering models carefully prior to any formal consideration of adopting a common currency.

At the moment, it is conclusive that the ASEAN is not an ideal candidate to adopt a monetary union. However, with the ASEAN Economic Community in place by 2015 and further integration in 2020, the ASEAN is moving on a right track. Certainly, ASEAN as a group presents numerous opportunities for foreign and domestic investors to take advantage of the future economic integration. As for their people, it is not too early to dream of a day when they can all proudly celebrate their brotherhood, peace, and comparable prosperity to that of the citizens of the European Union or the United States of America.[56]

APPENDIX

EXHIBIT A
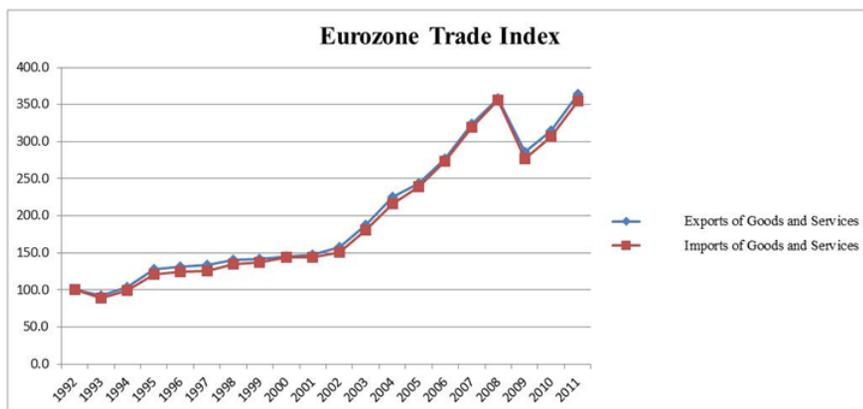
Note: The Treaty of Maatstricht was signed in 1992.
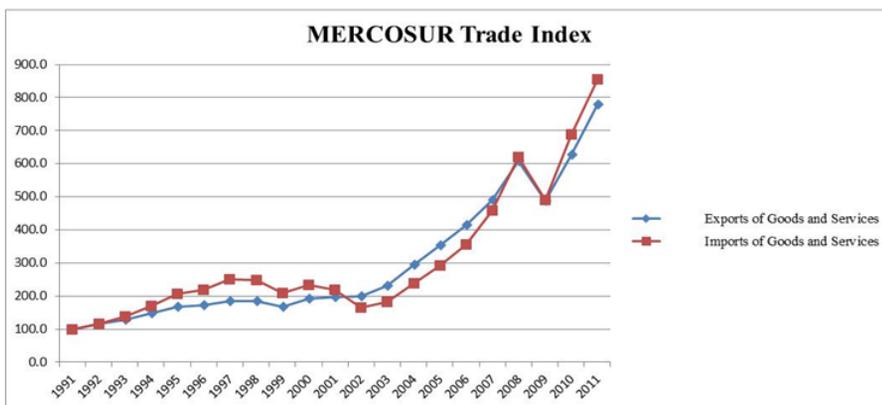
Note: MERCOSUR was founded in 1991.
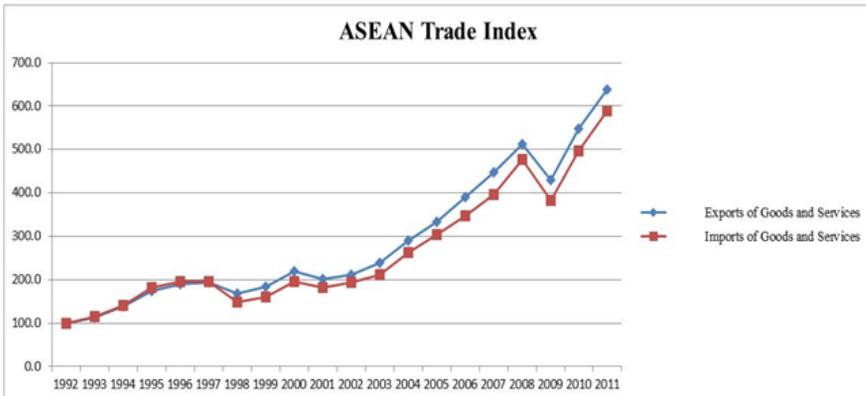
Note: The ASEAN Free Trade Agreement was signed in 1992.
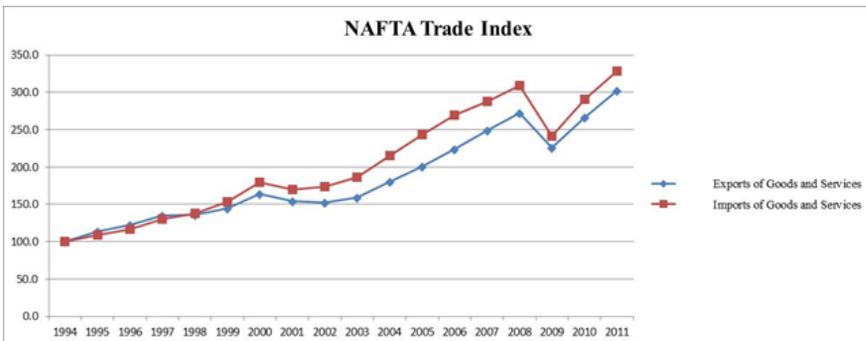
Note: The North America Free Trade Agreement was signed in 1994.
Source: Euromonitor International, 2012.

EXHIBIT B
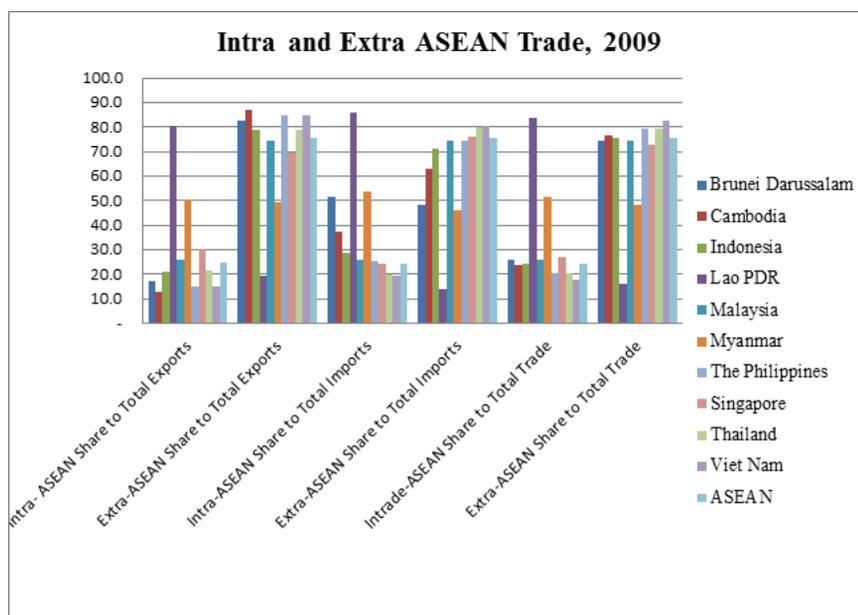
Source: ASEAN Statistics. In percentage.

EXHIBIT C
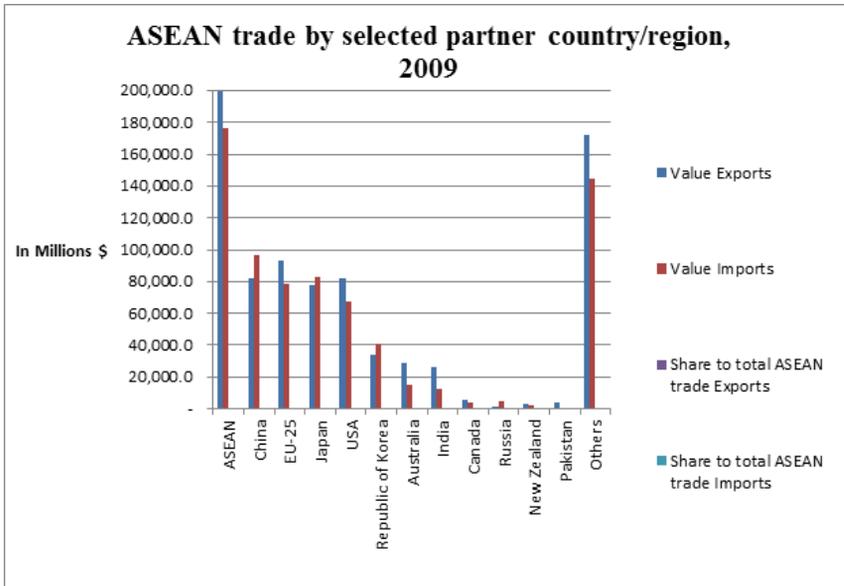
Source: ASEAN Statistics

EXHIBIT D
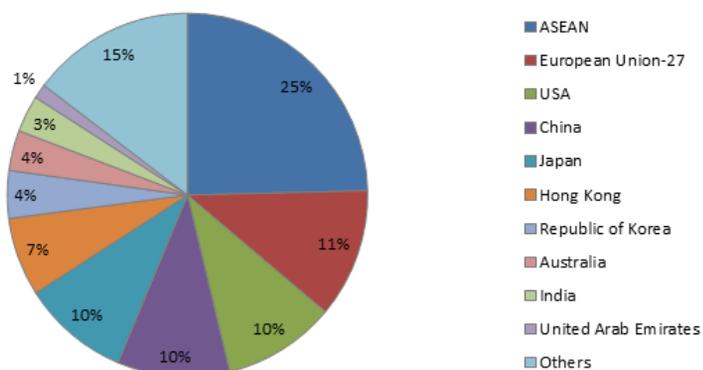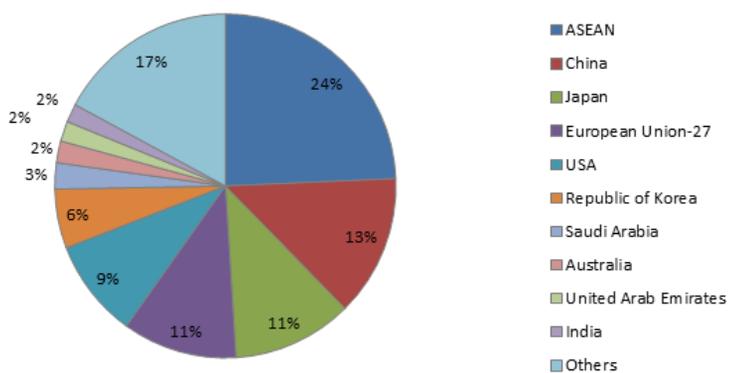
Source: ASEAN Statistics

EXHIBIT E

ASEAN Strategic Schedule (ASEAN, Park and Takagi)[57]

1. AEC Strategic Schedule (selective measures)—Free Flows of Investment

2010-2011	2012-2013	2014-2015
Complete Phase I of the progressive reduction/elimination of investment restrictions and impediments	Complete Phase II of the progressive reduction/elimination of investment restrictions and impediments	Complete the Final Phase of the progressive reduction/elimination of investment restrictions and impediments--realize free and open investment regime with minimal investment restrictions; achieve harmonization of investment measures to facilitate movement of investments
Commence Phase II of the progressive reduction/elimination of investment restrictions and impediments	Commence the Final Phase of the progressive reduction/elimination of investment restrictions and impediments	

2. ACMF Implementation Plan for Regional Integration of Capital Markets (Selective)

	2009-2010	2011-12	2013-2015
Cross-border distribution of primary offerings	Adopt the ASEAN and Plus standards for cross-border primary offerings	Phase out country specific Plus Standards; develop mutual recognition framework for primary offerings	Adopt harmonized ASEAN disclosure standards for primary offerings
Cross-border distribution of products	Allow distribution of listed products on ASEAN exchanges to non-retail investors		
Facilitate investment by non-retail investors	Identify restrictions to be removed for non-retail investors; allow cross recognition of ASEAN exchanges	Develop harmonized criteria for non-retail investors; remove restrictions that prevent them from investing freely in ASEAN	
Develop single passport/licensing for market intermediaries	Identify any policy/legal impediments for cross-border provision of services by market intermediaries	Develop mutual recognition for products and services by market intermediaries to non-retail investors	Establish mutual recognition for products and services by market intermediaries to non-retail investors; expands mutual recognition to all investors
Establish the electronic trading link	Implement ACE bilaterally through a phased approach	ASEAN exchanges endeavor to achieve full linkage to ACE gateway	
Implement depository linkages	When ready, ASEAN exchanges develop depository links		
Coordinate listing rules	Take necessary steps to promote cross listings on ASEAN exchanges	Harmonize listing rules to lower costs and ensure timely and contemporaneous disclosure by cross-listed entities	
Promote regional products and regional market intermediaries			Allow issuers and investors to freely issue and trade across the region; accelerate the development of regional intermediaries to serve ASEAN investors
	Facilitate ratings comparability within ASEAN	Design a regional strategy for ratings comparability	
	Strengthen capital income taxation; enhance withholding tax structure to promote the broadening of investor base	Analyze differences in national tax regulations and establish best practices for tax system	19

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57 Note: AEC: ASEAN Economic Community - ACMF: Asean Capital Markets Forum –-WC-CAL: Working Committee- Capital Accont Liberalization

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the Association of Southeastern Nations (ASEAN)
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1. AEC Strategic Schedule (selective measures)—Freer Flows of Capital

	2010-2011	2012-2013	2014-2015
Strengthen capital market development and integration			Achieve greater harmonization in offering rules, disclosure requirements and distribution rules; facilitate mutual recognition for market professionals; achieve greater flexibility for securities issuance; enhance withholding tax structure; facilitate market driven efforts to establish exchange and debt market linkages
Foreign direct investment	Progressively liberalize, where appropriate and possible, the pre-identified rules for freer flow of foreign direct investments		Continue to liberalize, where appropriate and possible, any other items related to foreign direct investment
Portfolio investment	2009-2010: Assess and identify rules for liberalization for freer flows of portfolio investments, particularly in debts and equity	2011-13: Progressively liberalize, where appropriate and possible, the rules identified for freer flow of portfolio investments	Continue to liberalize, where appropriate and possible, any other items related to portfolio investments
Other types of flows	2011-2012: Assess and identify rules for liberalization of other types of flows, particularly long-term foreign borrowing and lending	Progressively liberalize, where appropriate and possible, the rules identified for other types of flows, particularly long-term foreign borrowing and lending	Continue to liberalize, where appropriate and possible, any other items related to other types of capital flows
Current account transactions	Adopt IMF Article VIII status	Remove and/or relax, where appropriate and possible, restrictions on repatriation/surrender requirements	Continue to liberalize, where appropriate and possible, any other items related to current account transactions

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3. WC-CAL Work Plan

	2010-11	2012-13	2014-15
Current account liberalization	Achieve IMF Article VIII status	Remove/relax restrictions on repatriation/surrender requirements	Continue to liberalize current account transactions
Foreign direct investment	Liberalize the identified list of rules	Liberalize the identified list of rules	Further liberalization
Portfolio investment: debt and equity	2009-10: Assess and identify rules for liberalization	2011-13: Liberalize the identified list of rules	Further liberalization
Other types of flows: long-term foreign borrowing and lending	2010-11: Assess and identify rules for liberalization	Liberalize the identified list of rules	Further liberalization

EXHIBIT F

Level of Trade between Indonesia and the other countries

Average Percentage of Exports to	1980-1990	1991-2000	2001-2011
Malaysia	0.53%	2.17%	4.53%
Philipppines	0.89%	1.11%	1.67%
Singapore	9.92%	9.76%	8.99%
Thailand	0.47%	1.43%	2.57%
Average Percentage of Imports to	**1980-1990**	**1991-2000**	**2001-2011**
Malaysia	0.91%	2.57%	5.16%
Philipppines	0.68%	0.24%	0.49%
Singapore	10.49%	7.67%	14.36%
Thailand	1.01%	2.12%	5.04%
Average Exports as Percentage of GDP	**1980-1990**	**1991-2000**	**2001-2011**
Malaysia	0.12%	0.66%	1.22%
Philipppines	0.21%	0.34%	0.45%
Singapore	2.34%	2.88%	2.49%
Thailand	0.10%	0.43%	0.70%
Average Imports as Percentage of GDP	**1980-1990**	**1991-2000**	**2001-2011**
Malaysia	0.15%	0.52%	0.98%
Philipppines	0.11%	0.05%	0.09%
Singapore	1.70%	1.55%	2.71%
Thailand	0.16%	0.43%	0.94%

Looking at **Exhibit F**, it is clear the most important trading partner to Indonesia is Singapore, since, during the decades of 1980-1990, 1991-2000 and 2001-2011, the average levels of exports from Indonesia to Singapore are 9.92%, 9.76% and 8.99%, while the average level of imports are 10.49%, 7.67% and 14.36%, respectively. The other two important trading partners are subsequently Malaysia and Thailand, even though the levels of trade to these countries are substantially lower than to Singapore.

EXHIBIT G

Level of Trade between Malaysia and the other countries

Average Percentage of Exports to	1980-1990	1991-2000	2001-2011
Indonesia	0.72%	1.55%	3.27%
Philipppines	1.60%	1.29%	1.77%
Singapore	20.58%	20.81%	17.91%
Thailand	2.77%	3.87%	6.19%
Average Percentage of Imports to	**1980-1990**	**1991-2000**	**2001-2011**
Indonesia	1.09%	2.18%	5.50%
Philipppines	1.11%	1.42%	2.77%
Singapore	13.92%	14.56%	14.07%
Thailand	3.26%	3.35%	6.87%
Average Exports as Percentage of GDP	**1980-1990**	**1991-2000**	**2001-2011**
Indonesia	0.41%	1.34%	3.10%
Philipppines	0.85%	1.12%	1.67%
Singapore	10.92%	17.33%	17.05%
Thailand	1.47%	3.29%	5.86%
Average Imports as Percentage of GDP	**1980-1990**	**1991-2000**	**2001-2011**
Indonesia	0.51%	1.74%	4.20%
Philipppines	0.49%	1.16%	2.14%
Singapore	6.45%	11.37%	10.87%
Thailand	1.49%	2.66%	5.28%

Exhibit G shows us that Malaysia's most important trading partner is Singapore, as, during the three decades, the average levels of exports from Malaysia to Singapore are 20.58%, 20.81% and 17.91%; while the level of imports are 13.92%, 14.56% and 14.07%, respectively. The other important trading partners are Thailand, Indonesia and Philippines, in order of the level of trades.

EXHIBIT H

Level of Trade between Philippines and the other countries

Average Percentage of Exports to	1980-1990	1991-2000	2001-2011
Indonesia	0.55%	0.51%	0.98%
Malaysia	2.10%	3.59%	4.31%
Singapore	3.48%	6.56%	8.40%
Thailand	1.51%	3.02%	3.04%
Average Percentage of Imports to	1980-1990	1991-2000	2001-2011
Indonesia	2.05%	1.89%	2.93%
Malaysia	3.46%	3.01%	4.19%
Singapore	3.59%	6.01%	9.13%
Thailand	0.82%	2.37%	4.98%
Average Exports as Percentage of GDP	1980-1990	1991-2000	2001-2011
Indonesia	0.09%	0.18%	0.31%
Malaysia	0.32%	1.38%	1.46%
Singapore	0.54%	2.40%	2.56%
Thailand	0.24%	1.09%	0.95%
Average Imports as Percentage of GDP	1980-1990	1991-2000	2001-2011
Indonesia	0.43%	0.79%	1.02%
Malaysia	0.72%	1.27%	1.54%
Singapore	0.84%	2.50%	3.34%
Thailand	0.19%	1.01%	1.75%

Exhibit H clearly shows that Philippines's most important trading partner is again, Singapore, as the average levels of exports from Philippines to Singapore, during the three decades, are 3.48%, 6.56% and 8.40%; while the average levels of imports are 3.59%, 6.01%, and 9.13%. The subsequent important trading partners in the group are Malaysia, Thailand and finally, Indonesia.

EXHIBIT I

Level of Trade between Singapore and the other countries

Average Percentage of Exports to	1980-1990	1991-2000	2001-2011
Indonesia	-	-	7.90%
Malaysia	15.02%	16.56%	13.55%
Philipppines	1.32%	1.89%	2.07%
Thailand	4.61%	5.22%	3.99%
Average Percentage of Imports to	1980-1990	1991-2000	2001-2011
Indonesia	-	-	4.62%
Malaysia	13.80%	15.62%	13.86%
Philipppines	0.53%	1.31%	2.30%
Thailand	2.33%	4.53%	3.74%
Average Exports as Percentage of GDP	1980-1990	1991-2000	2001-2011
Indonesia	-	-	13.07%
Malaysia	21.07%	22.42%	21.58%
Philipppines	1.86%	2.55%	3.30%
Thailand	6.53%	7.03%	6.39%
Average Imports as Percentage of GDP	1980-1990	1991-2000	2001-2011
Indonesia	-	-	6.84%
Malaysia	23.26%	22.17%	19.94%
Philipppines	0.87%	1.81%	3.32%
Thailand	3.89%	6.41%	5.39%

Analysing **Exhibit I** reveals to us that Malaysia is undoubtedly Singapore's most important trading partner, with the average levels of exports from Singapore to Malaysia during the three decades are 15.02%, 16.56% and 13.55%; while the levels of imports are 13.80%, 15.62% and 13.86%, respectively. The second most valuable trading partner to Singapore in the group is Indonesia, with the level of export in the past decade as 7.90% and the level of import as 4.62%. Furthermore, what is astounding when examining this model is that the average exports to Malaysia accounts for 21.58% of the Singaporean GDP. Clearly, Malaysia is unquestionably vital to the growth model of Singapore.

EXHIBIT J

Level of Trade between Thailand and the other countries

Average Percentage of Exports to	1980-1990	1991-2000	2001-2011
Indonesia	2.07%	1.79%	4.32%
Malaysia	6.08%	4.54%	7.04%
Philippines	0.79%	1.22%	2.78%
Singapore	12.44%	15.05%	8.81%
Average Percentage of Imports to	1980-1990	1991-2000	2001-2011
Indonesia	0.61%	1.30%	2.70%
Malaysia	3.82%	4.42%	5.99%
Philippines	0.52%	0.87%	1.54%
Singapore	7.08%	5.99%	4.23%
Average Exports as Percentage of GDP	1980-1990	1991-2000	2001-2011
Indonesia	0.27%	0.54%	1.88%
Malaysia	0.83%	1.25%	3.06%
Philippines	0.11%	0.39%	1.22%
Singapore	1.69%	3.77%	3.82%
Average Imports as Percentage of GDP	1980-1990	1991-2000	2001-2011
Indonesia	0.18%	0.53%	1.57%
Malaysia	1.03%	1.80%	3.48%
Philippines	0.15%	0.37%	0.89%
Singapore	2.00%	2.39%	2.45%

Looking at **Exhibit J** gives the notion that both Malaysia and Singapore are important trading partners to Thailand. For the past three decades, the average levels of exports to Malaysia stand at 6.08%, 4.54% and 7.04%, while the average levels of imports stand at 3.82%, 4.42% and 5.99%, respectively. The aveage levels of exports to Singapore are 12.44%, 15.05% and 8.81%, while the average levels of imports are 7.08%, 5.99%, and 4.23%, respectively. Besides, the average exports to Malaysia and Singapore account for 3.06% and 3.82%, respectively, over the last decade.

EXHIBIT K

OLS: Budget Deficit (Surplus)

BudInd = e +BudMal + BudPhi + BudSin + BudTha

Regression Statistics	
Multiple R	0.830582172
R Square	0.689866744
Adjusted R Square	0.643921077
Standard Error	1.971049574
Observations	32

	Coefficients	Standard Error	t Stat	P-value
Intercept	-1.517475214	0.647230457	-2.34457	0.026655
Malaysia	0.253440202	0.07163295	3.538039	0.001481
Philippines	-0.461704274	0.145303491	-3.17752	0.003702
Singapore	0.003243522	0.044636022	0.072666	0.942608
Thailand	0.211712694	0.096083308	2.203428	0.036278

The OLS is employed to estimate the numerical values of the parameters in order to fit a function to a set of data and identify relevant statistical characteristics of the data. The OLS model works best when qualifying certain assumptions (Abdi):

- The population is well-defined and linear
- The error has a zero expected value
- The error is normally distributed and uncorrelated with the independent variables
- The independent variables are linearly independent

Therefore, the model should be kept as simple as possible, and only significant variables are used, through a series of hypothetical tests and omissions of insignificant variables. Specifically, after testing a function and identifying which indepdent variables are significant, the next step is to isolate those variables and the original dependent variable and perform another test in order to confirm if their relationship is indeed significant. The strength of each regression is determined based upon the *t* and *p* value. If the *t-value* is greater than 1.96 and *p-value* is less than 0.05, the model successfully identifies significant relationship(s) between the independent and dependent variables, based on a 95% significant level. The simplest formula of the OLS equation is:

$$Y_i = b_0 + b_1 X_1 + e_i$$

Looking at Exhibit K, one can see the first regression is the function of the Budget Deficit (Surplus) between Indonesia and the other countries. The equation of the function is:

$$BudInd = \text{-}1.5175e* + 0.2534 BudMal - 0.4617 BudPhi + 0.0032 BudSin + 0.2117\ BudTha$$

e: constant

This function identifies three possibly significant relationships—between Indonesia and Malaysia (IndMal), Indonesia and Philippines(IndPhi) and finally, Indonesia and Thailand (IndTha), since the three varibles satisfy both the p-values and t-values criteria. Thus, the next step is to run three separate functions between these relationships, and the final results imply that only the pairs IndTha and IndMal yield signficant relationships, based on a 95% confidence level. Tpically, the OLD model implies long-term relationships The two relevant equations are:

$$BudInd = \text{-}0.1237e + 0.3967\ BudTha \text{ (with a p-value of } 6.24\text{E}^{\text{-}6} \text{ and a t-value of 5.4668)}$$

$$BudInd = \text{-}1.2181e + 0.2413\ BudMal \text{ (with a p-value of } 3.37\text{E}^{\text{-}6} \text{ and a t-value of 5.6885)}$$

BudInd = e + BudTha

	Coefficients	Standard Error	t Stat	P-value
Intercept	-0.1237	0.42356708	-0.29204	0.772265
Thailand	0.396707	0.072566493	5.466808	6.24E-06

BudInd = e +BudMal

	Coefficients	Standard Error	t Stat	P-value
Intercept	-1.21807	0.435148925	-2.79921	0.00887
X Variable	0.241305	0.042442067	5.685508	3.37E-06

BudInd = e + BudPhi

	Coefficients	Standard Error	t Stat	P-value
Intercept	-0.21184	0.589642466	-0.35927	0.721913
X Variable	0.250802	0.169026429	1.483806	0.148292

BudMal = e + BudInd + BudPhi + BudSin + BudTha

Regression Statistics	
Multiple R	0.910106
R Square	0.828294
Adjusted R Squ	0.802856
Standard Error	4.377123
Observations	32

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	3.390641	1.435498	2.361996	0.025644	0.445242	6.336041
IND	1.24985	0.353261	3.538039	0.001481	0.525019	1.974681
PHI	1.171552	0.303679	3.857858	0.000644	0.548453	1.79465
SIN	0.14776	0.094967	1.555905	0.131376	-0.0471	0.342616
THA	0.292154	0.224841	1.299381	0.204799	-0.16918	0.75349

BudMal = e +BudInd

	Coefficients	Standard Error	t Stat	P-value
Intercept	4.212547	1.239208508	3.399385286	0.001927
X Variable	2.149366	0.378042979	5.685507969	3.37E-06

BudMal = e +BudPhi

	Coefficients	Standard Err	t Stat	P-value
Intercept	4.965238	1.30237	3.812462	0.000638
X Variable	2.003318	0.373336	5.365987	8.29E-06

BudPhi = e + BudInd + BudMal + BudSin + BudTha

Regression Statistics	
Multiple R	0.797313
R Square	0.635708
Adjusted F	0.581739
Standard E	2.227175
Observatio	32

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-2.34005	0.664027	-3.52403	0.001536	-3.70252	-0.97758
IND	-0.58949	0.18552	-3.17752	0.003702	-0.97015	-0.20884
MAL	0.303314	0.078622	3.857858	0.000644	0.141994	0.464634
SIN	0.032649	0.050048	0.652349	0.519692	-0.07004	0.135339
THA	0.129725	0.115254	1.125555	0.27026	-0.10676	0.366206

BudPhi = e +BudMal

	Coefficients	Standard Err	t Stat	P-value
Intercept	-1.63479	0.467099	-3.49988	0.001477
X Variable	0.244466	0.045558	5.365987	8.29E-06

BudPhi = e +BudInd

	Coefficients	Standard Err	t Stat	P-value
Intercept	-0.71084	0.602241	-1.18033	0.247143
X Variable	0.272611	0.183724	1.483806	0.148292

BudSin = e + BudInd + BudMal + BudPhi + BudTha

Regression Statistics	
Multiple R	0.664889
R Square	0.442077
Adjusted R	0.359422
Standard E	8.497432
Observatio	32

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	9.628539	2.43663	3.951581	0.000503	4.628988	14.62809
IND	0.060283	0.829594	0.072666	0.942608	-1.6419	1.76247
MAL	0.556871	0.357908	1.555905	0.131376	-0.1775	1.291238
PHI	0.475265	0.728544	0.652349	0.519692	-1.01958	1.970113
THA	0.041461	0.44986	0.092164	0.927248	-0.88158	0.964498

BudTha = e + BudInd + BudMal + BudPhi + BudSin

Regression Statistics	
Multiple R	0.81697
R Square	0.667439
Adjusted R	0.618171
Standard E	3.634629
Observatio	32

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.90818	1.297649	-0.69986	0.489999	-3.57073	1.754378
IND	0.7199	0.326718	2.203428	0.036278	0.04953	1.39027
MAL	0.201444	0.155031	1.299381	0.204799	-0.11665	0.519541
PHI	0.345489	0.306949	1.125555	0.27026	-0.28432	0.975297
SIN	0.007586	0.082304	0.092164	0.927248	-0.16129	0.17646

BudTha = e +BudInd

	Coefficients	Standard Err	t Stat	P-value
Intercept	-0.21697	0.754296	-0.28765	0.775593
X Variable	1.257976	0.230112	5.466808	6.24E-06

EXHIBIT L

OLS: Exchange Rates

ExInd = e + ExMal + ExPhi + ExSin + ExTha

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.961961
R Square	0.92537
Adjusted F	0.915419
Standard E	1145.43
Observatio	35

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-7752.74	2243.694256	-3.45535	0.001662	-12335	-3170.5
Mal	4634.235	1546.092522	2.997385	0.005426	1476.693	7791.777
Phi	99.28924	51.75019067	1.918626	0.064591	-6.39875	204.9772
Sin	-819.817	1137.187733	-0.72092	0.476542	-3142.26	1502.63
Tha	-95.9789	118.6758591	-0.80875	0.425027	-338.347	146.3895

ExInd= e + ExMal

	Coefficients	Standard Error	t Stat	P-value
Intercept	-13565.9	1140.933405	-11.8902	1.79E-13
X Variable	6160.646	380.0337514	16.21079	2.8E-17

ExMal = e + ExInd + ExPhi + ExSin + ExTha

Regression Statistics	
Multiple R	0.982745
R Square	0.965788
Adjusted F	0.961226
Standard E	0.118656
Observatio	35

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.885703	0.222198086	3.986095	0.000397	0.431914	1.339492
Ind	4.97E-05	1.65911E-05	2.997385	0.005426	1.58E-05	8.36E-05
Phi	0.00517	0.005601221	0.923073	0.363334	-0.00627	0.01661
Sin	0.159535	0.115192357	1.384944	0.176283	-0.07572	0.394789
Tha	0.046585	0.009060367	5.141649	1.56E-05	0.028081	0.065089

ExMal= e + ExInd

	Coefficients	standard Err	t Stat	P-value
Intercept	2.284679	0.053301	42.86386	1.63E-30
X Variable	0.000144	8.9E-06	16.21079	2.8E-17

ExMal= e + ExTha

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.637488417	0.098549203	6.468732	2.44E-07
X Variable	0.077443042	0.003211206	24.1165	1.56E-22

ExPhi = e + ExInd + ExMal + ExSin + ExTha

Regression Statistics	
Multiple R	0.975455663
R Square	0.951513751
Adjusted F	0.945048918
Standard E	3.813847674
Observatio	35

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	11.3691767	8.585659333	1.324205	0.195436	-6.16508	28.90343
Ind	0.001100758	0.000573722	1.918626	0.064591	-7.1E-05	0.002272
Mal	5.341571197	5.786728516	0.923073	0.363334	-6.47651	17.15965
Sin	-13.92940378	2.849142939	-4.88898	3.19E-05	-19.7481	-8.11068
Tha	0.780326331	0.373158549	2.091139	0.045086	0.018235	1.542418

ExPhi= e + ExSin

	Coefficients	Standard Error	t Stat	P-value
Intercept	96.93963171	12.21284309	7.937516	3.73E-09
X Variable	-37.07610668	6.702956849	-5.53131	3.84E-06

ExPhi= e + ExTha

	Coefficients	Standard Error	t Stat	P-value
Intercept	-28.7659695	4.411714226	-6.52036	2.1E-07
X Variable	1.984460056	0.143754825	13.80448	2.9E-15

ExSin = e + ExInd + ExMal + ExPhi + ExTha

Regression Statistics	
Multiple R	0.826666227
R Square	0.683377052
Adjusted F	0.641160659
Standard E	0.182324968
Observatio	35

	Coefficients	Standard Error	t Stat	P-value
Intercept	1.012312619	0.379676162	2.666253	0.012237
Ind	-2.07717E-05	2.88129E-05	-0.72092	0.476542
Mal	0.376679524	0.271981711	1.384944	0.176283
Phi	-0.031834508	0.006511482	-4.88898	3.19E-05
Tha	0.02472327	0.018553993	1.332504	0.192728

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ExSin= e + ExPhi

	Coefficients	Standard Error	t Stat	P-value
Intercept	2.190422434	0.08043864	27.23097	3.43E-24
X Variable	-0.012975853	0.002345893	-5.53131	3.84E-06

ExTha = e + ExInd + ExMal + ExPhi + ExSin

Regression Statistics	
Multiple R	0.976318729
R Square	0.953198261
Adjusted R S	0.94695803
Standard Err	1.743259751
Observations	35

	Coefficients	Standard Error	t Stat	P-value
Intercept	-7.811282281	3.777191276	-2.06801	0.047356
Ind	-0.000222312	0.000274884	-0.80875	0.425027
Mal	10.05532576	1.955661729	5.141649	1.56E-05
Phi	0.163032347	0.077963426	2.091139	0.045086
Sin	2.260152875	1.696169707	1.332504	0.192728

ExTha= e + ExMal

	Coefficients	Standard Error	t Stat	P-value
Intercept	-6.191358482	1.521155298	-4.07017	0.000276
X Variable	12.21939366	0.506681943	24.1165	1.56E-22

ExTha= e + ExPhi

	Coefficients	Standard Error	t Stat	P-value
Intercept	16.75004148	1.066922907	15.69939	7.18E-17
X Variable	0.429532945	0.031115483	13.80448	2.9E-15

EXHIBIT M

OLS: Inflation

InfInd = e + InfMal + InfPhi + InfSin + InfTha

Regression Statistics	
Multiple R	0.683539486
R Square	0.467226229
Adjusted F	0.396189726
Standard E	9.525879691
Observatio	35

	Coefficients	Standard Error	t Stat	P-value
Intercept	2.366285187	3.365772532	0.703044	0.487449
Mal	4.069720891	1.396458118	2.914316	0.006678
Phi	0.074189997	0.198832099	0.373129	0.711676
Sin	-5.423768025	1.193582966	-4.54411	8.41E-05
Tha	1.644789601	0.710912498	2.313632	0.027723

InfInd = e + InfMal

	Coefficients	tandard Err	t Stat	P-value
Intercept	4.961353	3.8832	1.277645	0.21029
X Variable	1.927208	1.028314	1.874144	0.069787

InfInd = e + InfSin

	Coefficients	tandard Err	t Stat	P-value
Intercept	12.74369	3.038468	4.194117	0.000193
X Variable	-0.6549	0.936507	-0.6993	0.489265

InfInd = e + InfTha

	Coefficients	tandard Err	t Stat	P-value
Intercept	7.084038	3.237445	2.188157	0.035843
X Variable	0.875205	0.537357	1.628721	0.112883

InfMal = e + InfInd + InfPhi + InfSin + InfTha

Regression Statistics	
Multiple R	0.85204
R Square	0.725972
Adjusted F	0.689435
Standard E	1.099474
Observatio	35

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.767922	0.36571	2.099815	0.04426	0.021044	1.514801
Ind	0.054216	0.018603	2.914316	0.006678	0.016223	0.092208
Phi	0.013295	0.022874	0.581223	0.565432	-0.03342	0.06001
Sin	0.558612	0.147105	3.797362	0.000664	0.258183	0.859041
Tha	0.088936	0.087581	1.015475	0.318	-0.08993	0.2678

InfMal = e + InfInd

	Coefficients	Standard Err	t Stat	P-value
Intercept	2.678088	0.438795	6.103272	7.12E-07
X Variable	0.049916	0.026634	1.874144	0.069787

InfMal = e + InfSin

	Coefficients	Standard Err	t Stat	P-value
Intercept	1.709634	0.329707	5.18532	1.07E-05
X Variable	0.648034	0.101621	6.376961	3.19E-07

InfPhi = e + InfInd + InfMal + InfSin + InfTha

Regression Statistics	
Multiple R	0.31842967
R Square	0.101397454
Adjusted F	-0.018416218
Standard E	8.726750372
Observatio	35

	Coefficients	Standard Error	t Stat	P-value
Intercept	5.610396221	2.935111979	1.911476	0.065538
Ind	0.062264467	0.166871212	0.373129	0.711676
Mal	0.837564611	1.441037973	0.581223	0.565432
Sin	1.063324638	1.407446328	0.755499	0.455841
Tha	-0.419148797	0.70283973	-0.59636	0.555405

InfSin = e + InfInd + InfMal + InfPhi + InfTha

Regression Statistics	
Multiple R	0.884948294
R Square	0.783133483
Adjusted F	0.754217947
Standard E	1.121417831
Observatio	35

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.126524193	0.398812094	-0.31725	0.753249	-0.94101	0.687959
Ind	-0.075166761	0.016541593	-4.54411	8.41E-05	-0.10895	-0.04138
Mal	0.581132878	0.153035943	3.797362	0.000664	0.268592	0.893674
Phi	0.017558834	0.023241366	0.755499	0.455841	-0.02991	0.065024
Tha	0.271444033	0.076143723	3.56489	0.001242	0.115938	0.42695

InfSin = e + InfInd

	Coefficients	tandard Err	t Stat	P-value
Intercept	2.606871	0.525309	4.962551	2.06E-05
X Variable	-0.0223	0.031885	-0.6993	0.489265

InfSin = e + InfMal

	Coefficients	tandard Err	t Stat	P-value
Intercept	-0.40043	0.504446	-0.7938	0.432985
X Variable	0.851853	0.133583	6.376961	3.19E-07

InfSin = e + InfTha

	Coefficients	tandard Err	t Stat	P-value
Intercept	0.298411	0.418025	0.713859	0.480333
X Variable	0.437762	0.069384	6.309221	3.89E-07

InfTha = e + InfInd + InfMal + InfPhi + InfSin

Regression Statistics	
Multiple R	0.83248084
R Square	0.693024349
Adjusted F	0.652094262
Standard E	2.253598139
Observatio	35

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.145390743	0.802355996	0.181205	0.857426	-1.49324	1.78402
Ind	0.092056216	0.039788624	2.313632	0.027723	0.010797	0.173315
Mal	0.373647192	0.367952974	1.015475	0.318	-0.37781	1.125107
Phi	-0.027952205	0.046870992	-0.59636	0.555405	-0.12368	0.067771
Sin	1.096221549	0.307504972	3.56489	0.001242	0.468213	1.72423

InfTha = e + InfInd

	Coefficients	Standard Error	t Stat	P-value
Intercept	3.750698665	0.859948927	4.361537	0.000119
X Variable	0.08501415	0.052196865	1.628721	0.112883

InfTha = e + InfSin

	Coefficients	Standard Err	t Stat	P-value
Intercept	1.758906	0.642262	2.738611	0.009869
X Variable	1.248949	0.197956	6.309221	3.89E-07

EXHIBIT N

OLS: Interest Rates

IrInd = e + IrTha + IrMal + IrPhi + IrSin

Regression Statistics	
Multiple R	0.852961278
R Square	0.727542941
Adjusted F	0.675646359
Standard E	2.73056807
Observatio	26

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-10.20384475	7.970188173	-1.28025	0.214418	-26.7788	6.371069
Mal	2.013922336	0.566722766	3.553629	0.001879	0.835358	3.192487
Phi	0.137928301	0.278472001	0.495304	0.625529	-0.44119	0.717043
Sin	3.338028189	1.81286048	1.841305	0.079748	-0.43202	7.108078
Tha	-0.875716838	0.616808856	-1.41975	0.170355	-2.15844	0.407007

IrTha = e + IrSin

	Coefficients	standard Err	t Stat	P-value
Intercept	4.271442	2.223216	1.92129	0.066649
X Variable	1.839048	0.264592	6.950501	3.46E-07

IrMal = e + IrTha + IrInd + IrPhi + IrSin

Regression Statistics	
Multiple R	0.933968415
R Square	0.872297
Adjusted F	0.847972619
Standard E	0.830864181
Observatio	26

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	5.297873958	2.236973079	2.368323	0.02754	0.645834	9.949914
Ind	0.186464765	0.05247165	3.553629	0.001879	0.077344	0.295586
Phi	-0.064303282	0.08406459	-0.76493	0.452826	-0.23913	0.110519
Sin	-1.052305634	0.548344927	-1.91906	0.06867	-2.19265	0.08804
Tha	0.646421122	0.136778542	4.726042	0.000115	0.361975	0.930868

IrMal = e + IrInd

	Coefficients	standard Err	t Stat	P-value
Intercept	1.149472	1.035127	1.110465	0.277801
X Variable	0.363282	0.052267	6.950501	3.46E-07

IrMal = e + IrTha

	Coefficients	Standard Err	t Stat	P-value
Intercept	2.564953	0.64196	3.9955	0.000533
X Variable	0.565838	0.061882	9.143802	2.74E-09

IrPhi = e + IrTha + IrInd + IrMal + IrSin

Regression Statistics	
Multiple R	0.909359105
R Square	0.826933981
Adjusted F	0.793969025
Standard E	2.127354035
Observatio	26

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-4.696958238	6.365259691	-0.73791	0.468738	-17.9342	8.540324
Ind	0.083719556	0.169026603	0.495304	0.625529	-0.26779	0.43523
Mal	-0.42155341	0.551102736	-0.76493	0.452826	-1.56763	0.724527
Sin	1.477602522	1.48758343	0.993291	0.331877	-1.616	4.571202
Tha	1.13628764	0.437732113	2.595852	0.016869	0.225974	2.046601

IrPhi = e + IrTha

	Coefficients	Standard Err	t Stat	P-value
Intercept	0.986301	1.326253	0.743675	0.464292
X Variable	1.26535	0.127845	9.897535	6.01E-10

IrSin = e + IrTha + IrInd + IrMal + IrPhi

Regression Statistics	
Multiple R	0.917874
R Square	0.842492
Adjusted F	0.812491
Standard E	0.304985
Observatio	26

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	4.053727	0.268002	15.12571	9.16E-13	3.496386	4.611069
Ind	0.041643	0.022616	1.841305	0.079748	-0.00539	0.088676
Mal	-0.14179	0.073884	-1.91906	0.06867	-0.29544	0.011863
Phi	0.030369	0.030575	0.993291	0.331877	-0.03321	0.093953
Tha	0.185691	0.059665	3.112232	0.005272	0.061611	0.309771

IrSin = e + IrTha

	Coefficients	Standard Err	t Stat	P-value
Intercept	4.083486	0.206957	19.73113	2.43E-16
X Variable	0.188322	0.01995	9.439859	1.5E-09

IrTha = e + IrSin + IrInd + IrMal + IrPhi

Regression Statistics	
Multiple R	0.967001264
R Square	0.935091446
Adjusted F	0.922727911
Standard E	0.922763271
Observatio	26

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-7.685032977	2.23794993	-3.43396	0.002491	-12.33910463	-3.03096
Ind	-0.100008816	0.070440947	-1.41975	0.170355	-0.246498784	0.046481
Mal	0.797326254	0.168709096	4.726042	0.000115	0.446476483	1.148176
Phi	0.213790961	0.082358697	2.595852	0.016869	0.042516675	0.385065
Sin	1.699859667	0.546186671	3.112232	0.005272	0.564002304	2.835717

IrTha = e + IrMal

	Coefficients	Standard Err	t Stat	P-value
Intercept	-1.32518	1.261799	-1.05023	0.304073
X Variable	1.373131	0.150171	9.143802	2.74E-09

IrTha = e + IrPhi

	Coefficients	Standard Err	t Stat	P-value
Intercept	1.31224	0.911582	1.43952	0.16292
X Variable	0.634778	0.064135	9.897535	6.01E-10

IrTha = e + IrSin

	Coefficients	Standard Err	t Stat	P-value
Intercept	-14.9927	2.649416	-5.65886	7.93E-06
X Variable	4.183352	0.443158	9.439859	1.5E-09

EXHIBIT O

Granger Causality Results: Budget Surplus (Deficit)

Indonesia

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.25488717	0.35224551	-0.72361	0.475768	-0.97894	0.469164
Malaysia	0.214098719	0.072285121	2.961864	0.006455	0.065515	0.362683
Philippines	0.054951713	0.164158011	0.334749	0.7405	-0.28248	0.392383
Singapore	-0.003943587	0.090104792	-0.04377	0.965425	-0.18916	0.181269
Thailand	0.127381056	0.101223689	1.258412	0.219426	-0.08069	0.335449

Malaysia

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.472964	0.829486	0.570189	0.573444	-1.23207	2.177996
IND	1.178362	0.397845	2.961864	0.006455	0.36058	1.996143
PHI	-0.11975	0.385232	-0.31084	0.758397	-0.9116	0.672109
SIN	-0.00801	0.21139	-0.03788	0.970076	-0.44252	0.426511
THA	0.256348	0.239376	1.070903	0.294054	-0.2357	0.748392

Philippines

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.01436	0.424114	-0.03385	0.973252	-0.88614	0.857421
IND	0.078094	0.23329	0.334749	0.7405	-0.40144	0.557629
MAL	-0.03092	0.09947	-0.31084	0.758397	-0.23538	0.173544
SIN	0.204333	0.099664	2.050213	0.050553	-0.00053	0.409196
THA	0.277631	0.11173	2.48484	0.019722	0.047967	0.507295

Singapore

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.886663	0.75455	1.175089	0.250609	-0.66434	2.437662
Ind	-0.01868	0.426822	-0.04377	0.965425	-0.89603	0.858665
Mal	-0.00689	0.181936	-0.03788	0.970076	-0.38087	0.367084
Phi	0.681088	0.332204	2.050213	0.050553	-0.00177	1.363942
Tha	0.025917	0.226862	0.114243	0.909923	-0.4404	0.492238

Thailand

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.110404	0.668867	0.165061	0.870172	-1.26447	1.485281
IND	0.450702	0.358152	1.258412	0.219426	-0.28549	1.186893
MAL	0.164797	0.153887	1.070903	0.294054	-0.15152	0.481116
PHI	0.691223	0.278176	2.48484	0.019722	0.119424	1.263022
SIN	0.019359	0.169452	0.114243	0.909923	-0.32896	0.367673

EXHIBIT P

Granger Causality Results: Exchange Rates

Indonesia

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-3.926077394	171.6460071	-0.02287	0.981908	-354.982	347.1294
Mal	2838.544519	1051.076957	2.700606	0.011433	688.8508	4988.238
Phi	14.27404368	72.84853431	0.195941	0.846023	-134.718	163.266
Sin	-3001.626741	2327.635202	-1.28956	0.207394	-7762.18	1758.922
Tha	280.3594887	100.334872	2.794238	0.009125	75.15163	485.5673

Malaysia

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	9.15E-05	0.027108	0.003376	0.99733	-0.05535	0.055533
Ind	7.08E-05	2.62E-05	2.700606	0.011433	1.72E-05	0.000124
Phi	0.016606	0.011092	1.497206	0.145146	-0.00608	0.039291
Sin	0.679805	0.356283	1.90805	0.06633	-0.04887	1.408486
Tha	0.011112	0.017732	0.626655	0.535788	-0.02515	0.047377

Philippines

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.935955	0.401224	2.332748	0.026807	0.115359	1.756551
Ind	9.26E-05	0.000473	0.195941	0.846023	-0.00087	0.001059
Mal	4.32071	2.885849	1.497206	0.145146	-1.58151	10.22293
Sin	2.286416	6.082195	0.37592	0.709713	-10.1531	14.7259
Tha	0.535775	0.270215	1.982772	0.056937	-0.01688	1.088427

Singapore

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.03848	0.011238	-3.42359	0.001862	-0.06146	-0.01549
Ind	-1.8E-05	1.4E-05	-1.28956	0.207394	-4.7E-05	1.06E-05
Mal	0.164073	0.08599	1.90805	0.06633	-0.0118	0.339941
Phi	0.002121	0.005642	0.37592	0.709713	-0.00942	0.01366
Tha	0.017103	0.008175	2.092224	0.045283	0.000384	0.033823

Thailand

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.098609	0.281383	0.350443	0.728539	-0.47688	0.674102
Ind	0.000757	0.000271	2.794238	0.009125	0.000203	0.00131
Mal	1.202361	1.918696	0.626655	0.535788	-2.72181	5.126536
Phi	0.222819	0.112378	1.982772	0.056937	-0.00702	0.452658
Sin	7.668002	3.665001	2.092224	0.045283	0.172233	15.16377

EXHIBIT Q

Granger Causality Results: Inflation

Indonesia

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.919799822	1.896054201	0.485113	0.631241	-2.95807	4.797666
Mal	4.661330971	1.305509375	3.570507	0.001266	1.991264	7.331397
Phi	0.432128597	0.208219643	2.07535	0.046929	0.006272	0.857986
Sin	-7.033570753	1.265679197	-5.55715	5.4E-06	-9.62218	-4.44497
Tha	3.054661659	0.736516121	4.147447	0.000268	1.548317	4.561006

Malaysia

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.09297	0.225025	-0.41315	0.682535	-0.5532	0.367259
Ind	0.06551	0.018348	3.570507	0.001266	0.027985	0.103035
Phi	-0.01087	0.026377	-0.41196	0.683395	-0.06481	0.04308
Sin	0.703697	0.171502	4.103153	0.000302	0.352937	1.054458
Tha	-0.08447	0.109085	-0.77439	0.44497	-0.30758	0.13863

Philippines

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.53833	1.581064	-0.34049	0.735943	-3.77197	2.695305
Ind	0.299249	0.144192	2.07535	0.046929	0.004343	0.594155
Mal	-0.53543	1.299704	-0.41196	0.683395	-3.19363	2.122762
Sin	3.611282	1.356828	2.661562	0.012549	0.836257	6.386307
Tha	-1.52043	0.720246	-2.11099	0.043512	-2.9935	-0.04737

Singapore

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.123877	0.193006	0.641827	0.526027	-0.27087	0.518619
Ind	-0.07332	0.013194	-5.55715	5.4E-06	-0.10031	-0.04634
Mal	0.521968	0.127211	4.103153	0.000302	0.261791	0.782145
Phi	0.054362	0.020425	2.661562	0.012549	0.012589	0.096136
Tha	0.340447	0.070798	4.808727	4.32E-05	0.195649	0.485245

Thailand

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.20121	0.378434	-0.53168	0.598994	-0.97519	0.572777
Ind	0.121883	0.029388	4.147447	0.000268	0.061779	0.181988
Mal	-0.23983	0.309705	-0.77439	0.44497	-0.87325	0.393586
Phi	-0.0876	0.041499	-2.11099	0.043512	-0.17248	-0.00273
Sin	1.303089	0.270984	4.808727	4.32E-05	0.748864	1.857313

EXHIBIT R

Granger Causality Results: Interest Rates

Indonesia

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.074696	0.64652	0.115536	0.909173	-1.27392	1.423313
Mal	1.474219	0.781064	1.88745	0.073699	-0.15505	3.103489
Phi	-0.23324	0.389611	-0.59865	0.556129	-1.04595	0.579475
Sin	1.782564	2.127069	0.838038	0.411913	-2.65442	6.219553
Tha	0.069827	0.830572	0.08407	0.933836	-1.66272	1.802369

Malaysia

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.16079	0.166749	-0.96427	0.346426	-0.50862	0.187041
Ind	0.102558	0.054337	1.88745	0.073699	-0.01079	0.215902
Phi	0.003615	0.103676	0.034868	0.972531	-0.21265	0.219879
Sin	-0.51936	0.558855	-0.92932	0.363805	-1.68511	0.646396
Tha	0.436323	0.196187	2.224023	0.037827	0.027085	0.845561

Philippines

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.2466	0.363739	-0.67795	0.505572	-1.00534	0.51215
Ind	-0.07547	0.126074	-0.59865	0.556129	-0.33846	0.187512
Mal	0.016815	0.482243	0.034868	0.972531	-0.98913	1.022756
Sin	2.523671	1.094085	2.30665	0.031904	0.24145	4.805892
Tha	0.21067	0.4702	0.448043	0.658938	-0.77015	1.19149

Singapore

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.029712	0.066493	0.446847	0.659786	-0.10899	0.168415
Ind	0.019031	0.022709	0.838038	0.411913	-0.02834	0.066401
Mal	-0.0797	0.085765	-0.92932	0.363805	-0.25861	0.0992
Phi	0.083264	0.036097	2.30665	0.031904	0.007966	0.158561
Tha	0.255577	0.064044	3.990659	0.000719	0.121984	0.38917

Thailand

	Coefficients	Standard Err	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.01216	0.174062	-0.06986	0.945002	-0.37525	0.350928
Ind	0.005059	0.060178	0.08407	0.933836	-0.12047	0.130589
Mal	0.454427	0.204327	2.224023	0.037827	0.028209	0.880645
Phi	0.04717	0.105281	0.448043	0.658938	-0.17244	0.266783
Sin	1.734467	0.434632	3.990659	0.000719	0.827841	2.641093

EXHIBIT S

The Divergence of the ASEAN members

Country	Indonesia*	Malaysia*	Philippines*	Singapore*	Thailand*	Brunei	Vietnam	Laos	Myanmar	Cambodia
Years of Independence	1949 (from Netherlands)	1957 (from the	1946 (from the US)	1965 (from Malaysia)	Never colonized	1984 (from the UK)	1945 (from France)	1949 (from France)	1948 (from the UK)	1953 (from France)
Population (million)	245.6	28.7	101.8	4.7	66.7	0.401	90.5	6.5	53.9	14.7
Total Area (sq km)	1,904,569	329,847	300,000	697	513,210	5,765	331,210	236,800	676.578	181,035
Ethnic Groups	Javanese (40.6%), Sudanese (15%), Madurese	Malay (50.4%), Chinese	Tagalog (28.1%), Cebuano (13.1%), Ilocano	Chinese (76.8%), Malay (13.9%), Indian	Thai (75%), Chinese (14%)	Malay (66.3%), Chinese (11.2%)	Kinh (85.7%), Tay (1.9%), Thai (1.8%)	Lao (55%), Khmou (11%), Hmong (8%)	Burman (68%), Shan (9%), Karen	Khmer (90%), Vietnamese (5%)
Religions	Muslim (86.1%), Protestant (5.7%)	Muslim (60.4%), Buddhi	Roman Catholic (80.9%), Muslim (5%)	Buddhist (42.5%), Muslim (14.9%)	Buddhist (94.6%), Muslim (4.6%)	Muslim (67%), Buddhist (13%)	Buddhist (9.3%), Catholic (6.7%), Hao Hao (1.5%)	Buddhist (67%), Christian (1.5%)	Buddhist (89%), Christian (4%)	Buddhist (96.4%)
Languages	Bahasa Indonesia	Bahsa Malays	Filipino and	Mandarin,	Thai	Malay	Vietnamese	Lao	Burmese	Khmer
Government type	Republic	Constitutional Monarchy	Republic	Parliamentary Republic	Constitutional Monarchy	Constitutional sultanate	Communist state	Communist state	Military regime	Multiparty democracy and monarchy
Legal System	Roman-Dutch civil law system	English Common Law	Spanish and Anglo-American Law	English common law	Civil Law and Common Law	English common law and Islamic Law	European style civil law	French civil law system	English common law	Civil Law
GDP per capita	$4,200	$14,700	$3,500	$62,100	$8,700	$51,600	$3,100	$2,500	$1,400	$2,100

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