

## The economic convergence in ASEAN and prospects for a monetary union

Abdul Mongid\*

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### Abstract

ASEAN countries have deliberated on the feasibility of a monetary union that seeks to set a common currency in the region. This is in accordance with the second declaration of the Bali Concord reaffirming the intention toward economic cooperation and integration. This study investigates the possibility of convergence of economic and monetary variables among ASEAN member countries by using cointegration methodology on economic data. The study found that most monetary data are not converged. Based on the results, monetary union in the form of a currency union is not yet feasible. However, ASEAN countries should start to apply a loose monetary union and dare to step onward and act consistently.

*JEL classification:* F15, F33, F36

*Keywords:* Exchange rate, inflation rate, industrial production, base money and cointegration test, monetary union

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### 1. Introduction

The last three decades have seen rapid progress in the economies of Southeast Asian countries. As reported by the World Bank [1993], the 23 economies of East Asia grew faster than all the other regions in the world during the period 1965-1990. The high-performing Asian economies (HPAE) such as Japan, the Four Asian Tigers (Hong Kong, South Korea, Singapore, and Taiwan), and the three newly industrializing Southeast Asian economies (Indonesia, Malaysia, and Thailand) have grown at a rate more than twice as fast as the rest of East Asia since 1960. This paper tries to investigate the ASEAN economic development, with focus on the possibility of setting up a monetary arrangement among the members.

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\*Lecturer, STIE Perbanas, Surabaya, Indonesia.

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## 2. Previous work

Monetary integration refers to cooperative arrangements in exchange rates and/or monetary policy. It is assumed that establishing a common monetary arrangement will potentially yield high economic benefits for its members. Moreover, in some cases, economic/monetary integration is viewed as a faster way to improve economic performance and welfare.

The theory of economic integration proposes three stages to integration. First is the Preferential Trading Area, in which members agree to lower tariffs. Second is the free trade area, in which all trade barriers among members are removed, but each country is allowed to retain trade barriers to nonmembers. Custom union is free trade among members, and adopt the same rule to nonmembers. Common market is custom union plus free movement of labor and capital. Economic union is common market status plus fiscal and monetary policy harmonization. Third and last, monetary integration is the final stage in economic union.

To increase ASEAN's economic performance, its members have worked on regional integration by improving economic development cooperation. Up until the Asian financial crisis of 1997-1998, the 1990s witnessed the increased economic integration of the ASEAN region through increased trade, attempts toward economic policy coordination, and the initiation of regional trade liberalization. This increase was also augmented by the ASEAN Free Trade Area (AFTA), launched in 1992, with the aim of creating an increasingly liberal intraregional trading zone.

ASEAN has made significant efforts to forge cooperation in finance. The ASEAN swap arrangement has been expanded to include all ten ASEAN members and to raise the amount involved to US\$ 1 billion. A network of bilateral currency swap and repurchase agreements is being built among ASEAN members, China, Japan, and Korea. ASEAN has been doing these to deepen economic integration and cooperation, partly in response to the financial crisis, but largely on the basis of its members' appreciation of their overall long-term interests. Of course, ASEAN should do more.

The removal of tariffs on intra-ASEAN trade should be done faster and sooner. The newer members should move more quickly to reduce their tariffs. Member states should view the liberalization of trade in services within ASEAN as critical to the integration of the regional economy rather than as a subject of bargaining. This is particularly important in air transportation services, telecommunications, financial services, and tourism. A regional mind-set should be more intensively cultivated in the business community as well as among policymakers.<sup>1</sup>

But good intentions alone are not enough. The experience of European countries indicates that many necessary conditions must be fulfilled before a successful integration and monetary arrangement can be achieved. A monetary arrangement in this context is the introduction of a single currency in the ASEAN. It is also vital

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<sup>1</sup>Address by Rodolfo C. Severino, Secretary-General of the Association of Southeast Asian Nations, at Asialink, Melbourne, Australia, June 19, 2002.

that a unification of economic trends be achieved. This means that countries within the bloc must be experiencing the same situation, especially in terms of economic performance. Variations in economic development would reduce integration into a case of "beggaring thy neighbor's country".

Academically, economic integration has many benefits. According to Kawai and Motonishi [2004], among these are the reduction of the risk of economic crisis; the creation of a regional mechanism to manage the cost of crisis; a quicker pace in domestic reform; an increase in the power of ASEAN in the global economic forum; and the promotion of faster support in harmonizing "soft infrastructure", such as payments and settlements systems, accounting systems, regulatory frameworks, and standards that can facilitate the integration of financial markets.

The motivation behind the creation of a monetary union is the search for new and creative arrangements that may lead to improved stability and faster growth. According to Eichengreen [1997], monetary union can be a solution to the problem of exchange-rate instability. Although politically it is still premature, this discussion has emphasized the choice. The idea of regional currencies has received increasing attention in developing countries, particularly following Europe's success with the establishment of the Euro as its single currency. Ultimately, a monetary union would involve the establishment of a common central bank that would issue a common currency and implement a single monetary and exchange rate policy for all its members. Another example of a monetary union is the African Financial Community (CFA) franc zone, which encompasses fourteen African countries, and is regarded as a starting point for developing countries.

Mentz and Sebastian [2003] try to measure the inflation convergence among EU member states—specifically, whether they have become weaker since the implementation of the Euro. The methodology used is cointegration analysis of the Johansen test. The results show that after the establishment of the European Central Bank (ECB) and the introduction of a uniform currency, no complete convergence of the inflation rates is noticeable. This can be interpreted as a decrease in inflation convergence after the introduction of the Euro.

To see whether the ASEAN economy is ready to come to a monetary arrangement, we conduct a very simple test to determine whether ASEAN economies are experiencing a convergence or divergence process. The convergence process must work over time and must be in accordance with the neoclassical framework, or converging to a common rate of development. The variables used in this study are mainly borrowed from the European Central Bank convergence criteria.

### **3. Methodology**

The study hinges on the assumption that a monetary union needs converging economic development among the members. ECB has adopted very strict convergence

criteria for its member states, especially in the area of monetary variability. A study by Lim and McAleer [2003] uncovered some interesting points on the convergence process in ASEAN. The second point of this study is evidence of a catching-up process. A study by Lee [2004] on the case of properly using cointegration technique provides a foundation methodology for this study.

However, if there is equilibrium in the relationships between such variables, then for these relationships to have any meaning, in a linear combination of these variables the disequilibrium error should fluctuate about zero, i.e., should be stationary. Therefore, if  $Y$  and  $X$  are cointegrated, then there exists a number  $d$ , such that  $C = Y - \delta X$  is stationary, where the parameter  $d$  is the cointegrating parameter that links the two time series together. Furthermore, the relationship  $Y = dX$  is considered to be long term or "in equilibrium". Under such circumstances, these situations are said to be cointegrated—i.e., when economic variables are cointegrating, there is a convergence process.

The specific model used in this study is cointegration. Cointegration is a property of some nonstationary time-series data. In this concept, as mentioned above, two variables are cointegrated when a linear combination of the two is stationary, even though each variable is nonstationary. In particular, if we consider two time series,  $X$  and  $Y$ , that are nonstationary, conventionally we may expect that a linear combination of the two variables would also be nonstationary. To avoid the problem of nonstationarity, it is necessary to make use of first (or higher) differentiated data. Such differentiating, however, may result in a loss of low-frequency information or long-run characteristics of the series data.

This statistical concept introduced by Granger [1983], Granger and Weiss [1983] and Engle and Granger [1987] has received wide attention and is now applied to test the validity of various theories and models.

The Johansen test [EViews 2003] examines several nonstationary variables for cointegration. It enables an analysis of the convergence of  $k$  economic variables by starting with a vector error correction model. However, pair on pair is relatively difficult so Lee [2004] suggests using a multivariate way to test cointegration jointly (the multiple cointegrating regression), which can be formulated thus:

$$X_i = \alpha + \beta_j X_j + \beta_k X_k + \varepsilon \quad (1)$$

The data used in this study were downloaded from the Asia Recovery Information Centre (ARIC)—Asian Development Bank (ADB) website. The data cover the Philippines, Indonesia, Singapore, Malaysia, and Thailand. The data for monetary variables are collected monthly, and a total of 131 observations were taken from February 1990 to May 2005. The data for real sector variables span the first quarter of 1993 to the first quarter of 2005.

## 4. The result

### 4.1. Data description

Table 1 presents the descriptive statistics of the variables used in the study. On the exchange rate variable, it can be seen that Indonesia experienced the most depreciated value, while Singapore has the most stable currency in ASEAN. For quarterly GDP growth, Thailand is the best performer, while Singapore exhibits less growth and so provides evidence for the catching-up process hypothesis. Singapore, as with most developed economies, usually grows at a slower rate than the developing economies. The data for broad money in Malaysia were not available at the time of the study. Again, Indonesia has the highest inflation rate, while Singapore is the most stable. Malaysia is the best in industrial production.

**Table 1. Descriptive statistics of the data**

<i>Variable</i>	<i>Type</i>	<i>Malaysia</i>	<i>Indonesia</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Philippines</i>
Exchange rate	Mean	81.39	71.04	87.20	77.91	78.15
	Median	75.54	69.18	85.14	67.54	76.50
	Stationary	Diff (1)	Diff (1)	Diff (1)	Diff (1)	Diff (1)
Q GDP	Mean	1.05	1.14	0.94	1.15	1.07
	Median	1.16	1.27	0.43	1.14	1.24
	Stationary	Diff (1)	Diff (1)	Diff (1)	Diff (1)	Diff (1)
Broad money	Mean	NA	461447	129.31	3846	972
	Median	NA	329816	121	4203	983
	Stationary	NA	Diff (1)	Diff (1)	Diff (1)	Diff (1)
Inflation	Mean	100	151	98	100	104
	Median	101	104	100	105	103
	Stationary	Diff (1)	Diff (1)	Diff (1)	Diff (1)	Diff (1)
Industrial production	Mean	193	106	99	114	116
	Median	192	105	97	108	115
	Stationary	Diff (1)	Diff (1)	Diff (1)	Diff (1)	Diff (1)

### 4.2. Cointegration test result

#### 4.2.1. Industrial production

The industrial index is a measure of each country's industrial production. The results of the Johansen test show that, independently of lag 1, only partial convergence has occurred in the sample period of first quarter 1993 to second quarter 2005. The maximum Eigenvalue test statistics indicate three cointegration

relationships for the model specifications with one lag (Table 2). As for the model specification, the maximum Eigenvalue test rejects the null level of the cointegration rank at the 1 percent level. Thus, we can only assume the existence of a maximum of two cointegrated relationships. At the critical level for 5 percent, the trace statistic's test value without constant is additionally significant, which indicates three cointegrated vectors. To sum up, the Johansen test shows that majority convergence of industrial production in the countries under examination occurred in the period between 1993 and 2005.

**Table 2. Industrial index cointegration results**

<i>Eigenvalue</i>	<i>Likelihood ratio</i>	<i>5% critical value</i>	<i>1% critical value</i>	<i>Hypothesized no. of CE(s)</i>
0.810134	93.51866	68.52	76.07	None**
0.604623	55.30559	47.21	54.46	At most 1**
0.575929	33.96351	29.68	35.65	At most 2*
0.457317	14.23288	15.41	20.04	At most 3
0.007563	00.174603	3.76	6.65	At most 4

\*(\*\*) denotes rejection of the hypothesis at 5 percent (1 percent) significance level.

Likelihood ratio test indicates three cointegrating equation(s) at 5 percent significance level.

Test assumption: Linear deterministic trend in the data.

#### 4.2.2. GDP growth

Table 3 presents the result for gross domestic product (GDP) growth. The GDP growth should provide uniform results. This means each country in the study should grow at relatively the same rate. It is very important to understand that each nation should not grow faster than the rest, especially when its economic level is higher than the other members' to begin with. However, cases wherein a relatively poor country such as Indonesia grows faster to catch up with the others will still be acceptable.

Test results of the Johansen test for GDP growth show that, independently of lag 1, total convergence occurred in the sample period, first quarter 1993 to first quarter 2005. The maximum Eigenvalue test statistics indicate four cointegration relationships for the model specifications with one lag (Table 3). As for the model specification, the maximum Eigenvalue test rejects the null level of the cointegration rank at the 1 percent level. Thus, we can assume the existence of total cointegrated relationships at the critical level for 55 percent, which indicates five cointegrated vectors. To sum up, the Johansen test shows that full convergence of industrial production in the countries under examination occurred in the period between 1993 and 2005.

**Table 3. GDP growth cointegration results**

<i>Eigenvalue</i>	<i>Likelihood ratio</i>	<i>5% critical value</i>	<i>1% critical value</i>	<i>Hypothesized no. of CE(s)</i>
0.9368	113.91	68.52	76.07	None**
0.7028	61.44	47.21	54.46	At most 1**
0.6538	38.38	29.68	35.65	At most 2**
0.5082	18.23	15.41	20.04	At most 3*
0.2210	4.74	3.76	6.65	At most 4*

\*(\*\*) denotes rejection of the hypothesis at 5 percent (1 percent) significance level.

Likelihood ratio test indicates five cointegrating equation(s) at 5 percent significance level.

#### 4.2.3 Broad money

Broad money indicates national liquidity. It is a measure of the money supply that includes currency in circulation plus demand deposits, savings and small time deposits, overnight repurchase agreement (repo) at commercial banks, and non-institutional money market accounts. This is a key economic indicator used to forecast inflation, since it is not as narrow as M1 and still relatively easy to track. The components of broad money are very liquid, and the noncash components can be converted into cash very easily. Please note that only four countries are included in the analysis.

Test results of the Johansen test for broad money show that, independently of the lag 1, major convergences occurred in the sample period of first quarter 1993 to second quarter 2005. The maximum Eigenvalue test statistics indicate three cointegration relationships for the model specifications with one lag (Table 4). The maximum Eigenvalue test rejects the null level of the cointegration rank at the 1 percent level. Thus, we can assume the existence of major cointegrated relationships. At the critical level for 5 percent, the trace statistics' test value without constant is additionally significant, which indicates three cointegrated vectors. To sum up, the Johansen test shows that three convergence of broad money growth in the countries under examination occurred in the period between 1993 and 2005.

#### 4.2.4. Exchange rate

Exchange rate is the most critical variable in the monetary union. As the exchange rate is not a merely economic variable but in some case is influenced by political sentiment and policy, the result may not be as expected. However, as most ASEAN currencies are linked to the US dollar, the result should provide a case for strong integration.

**Table 4. Broad money cointegration test results**

<i>Eigenvalue</i>	<i>Likelihood ratio</i>	<i>5% critical value</i>	<i>1% critical value</i>	<i>Hypothesized no. of CE(s)</i>
0.275645	105.0110	47.21	54.46	None **
0.126479	47.28819	29.68	35.65	At most 1 **
0.115796	23.08333	15.41	20.04	At most 2 **
0.005873	1.054297	3.76	6.65	At most 3

(\*\*) denotes rejection of the hypothesis at 5 percent (1 percent) significance level. Likelihood ratio test indicates five cointegrating equation(s) at 5 percent significance level.

Using the Johansen cointegrating test, the exchange rate variable shows that, independently of lag 1, a small convergence occurred in the sample period of February 1990 to July 2005. The maximum Eigenvalue test statistics indicate only one cointegration relationship for the model specifications with one lag (Table 5). The maximum Eigenvalue test rejects the null level of the cointegration rank at the 1 percent level. Thus, we can assume the existence of one cointegrated relationship. At the critical level of 5 percent, the trace statistic's test value without constant is additionally significant, which indicates one cointegrated vector. To sum up, the Johansen test shows only one convergence of exchange rate in the countries under examination for the samples 1990 and 2005.

**Table 5. Exchange rate cointegration test results**

<i>Eigenvalue</i>	<i>Likelihood ratio</i>	<i>5% critical value</i>	<i>1% critical value</i>	<i>Hypothesized no. of CE(s)</i>
0.332354	119.3883	68.52	76.07	None **
0.101568	45.05272	47.21	54.46	At most 1
0.072413	25.34545	29.68	35.65	At most 2
0.042904	11.51439	15.41	20.04	At most 3
0.018552	3.445638	3.76	6.65	At most 4

(\*\*) denotes rejection of the hypothesis at 5 percent (1 percent) significance level. Likelihood ratio test indicates five cointegrating equation(s) at 5 percent significance level.

#### *4.2.5 Inflation rate*

Price instability or inflation may be regarded as the most dangerous of economic diseases, as it is very difficult to eradicate it. The inflation rate is usually used to measure price stability. Countries experiencing high inflation rates would find it very difficult to participate in a monetary arrangement. However, evidence from the ECB shows that price stability after the introduction of the Euro also tended to diverge, implying that it is a necessary but insufficient condition for successful monetary integration.

To verify the existence of convergence on inflation rate, the cointegration test is conducted. Using the the Johansen cointegrating test, the inflation rate variable shows that independently of lag 1, a small convergence occurred in the sample period of February 1990 to July 2005. The maximum Eigenvalue test statistics indicate only two cointegration relationships for the model specifications with one lag (Table 6). The maximum Eigenvalue test rejects the null level of the cointegration rank at the 1 percent level. Thus, we can assume the existence of two cointegrated relationships. To sum up, the Johansen test shows only two convergences of the exchange rates in the countries under examination for the samples 1990 and 2005. This may provide strong evidence that some countries being studied are experiencing a divergence of inflation rates.

**Table 6. Inflation rate cointegration test results**

<i>Eigenvalue</i>	<i>Likelihood ratio</i>	<i>5% critical value</i>	<i>1% critical value</i>	<i>Hypothesized no. of CE(s)</i>
0.203045	95.92946	68.52	76.07	None**
0.133741	54.85014	47.21	54.46	At most 1**
0.102656	28.86378	29.68	35.65	At most 2
0.040386	9.258540	15.41	20.04	At most 3
0.009878	1.796898	3.76	6.65	At most 4

\*(\*\*) denotes rejection of the hypothesis at 5 percent (1 percent) significance level.

Likelihood ratio test indicates five cointegrating equation(s) at 5 percent significance level.

We can see in Table 7 that in terms of industrial index, we get three cointegrating conditions, while GDP growth shows five cointegrating results. For broad money, only three cointegrated results are significant. For the exchange rate variable, there is only one significant cointegrating result. For the inflation rate, two cointegrating results are significant. Looking at the results, we can see that the real sectors in five ASEAN countries under investigation are relatively more in convergence with one another. In contrast, the five ASEAN countries' monetary variables, such as the exchange rate and inflation rate, are not in convergence with one another.

**Table 7. Summary of result**

<i>No.</i>	<i>Categories</i>	<i>Number of significant</i>	<i>Sector</i>
1	Industrial index	3 Cointegrating	Real
2	GDP growth	5 Cointegrating	Real
3	Broad money	3 Cointegrating	Monetary
4	Exchange rate	1 Cointegrating	Monetary
5	Inflation rate	2 Cointegrating	Monetary

## 5. What next?

To succeed in economic integration, every member must behave and perform at the same tone and pace. To achieve this, every country must undertake the same actions to achieve a standard performance. These preconditions act as a way to screen governments and earn their willingness and commitment to follow economic policies that do not impose costs upon other members. Moreover, high nominal convergence is desirable so as to avoid large skewed movements on some economic variables such as real exchange rate.

The experience of the European Monetary Union (EMU) shows that the path toward a common currency is fraught with difficulties. The EMU experience clearly indicates that the internal adaptability of some participating economies was insufficient or unreliable for a smooth working of the new system. The periodic crises and the recurring need for realignments within the EMU demonstrate that transition arrangements toward a currency union are only sustainable when economic policies are largely subordinated to the maintenance of the agreed exchange-rate bands.

The fact that the EMU countries attained that goal highlights their strong political commitment to it. The question is whether ASEAN members can adopt the same attitude. Politically, ASEAN has made some efforts to lay the foundation for setting up an ASEAN Economic Community. Even now, there is a proposal to establish an Asian Economic Community (AEC), which is broader in coverage than any of the existing subregional integration arrangements. ASEAN has even agreed to the creation of an ASEAN Economic Community (ASEAN-EC) by 2020 with a view to achieving greater economic integration in the region, as stipulated in the ASEAN Vision 2020.

Based on the above results (although these are very simple and preliminary) and in light of the difficult challenges ahead, it seems there is still a long way to go before ASEAN monetary integration can be achieved. However, after analysing an extensive set of economic variables such as money, interest rates, price levels, real GDP, investment, trade intensity, trade dependence, labor mobility, and FDI, a study by Goto and Hamada [1994] found that the degree of interdependence among East Asian countries was substantial, with some integration indicators showing higher integration than that in Europe. This finding is also supported by the fact that the speed of adjustment is much faster in Asia, especially in ASEAN.

Looking at the results of this simple study, it is very clear that monetary variables in ASEAN are not quite heading toward convergence yet. Keeping in mind that monetary integration is a cooperative arrangement in exchange rates and/or monetary policy, ASEAN countries should adopt a strict rule to direct monetary variables toward convergence. The experiences of the ECB, particularly in its use of convergence criteria, can be used as a guide.

In the ECB convergence criteria, four variables were taken into consideration: price development, fiscal development, exchange rate, and long-term interest rate. Price development is measured using the inflation rate. Fiscal condition refers to the government deficit. Exchange rate is the level of appreciation or depreciation. Long-term interest rate shows the behavior of the interest rate in the economy. In the treaty provision to join the European Union, it is clearly stated that a joining country should make all efforts to achieve a high degree of price stability as close to the standard set by the ECB as possible.

The criterion on price stability requires that a member state achieve a price performance that is sustainable and an average rate of inflation, observed over a period of one year before the examination, that does not exceed by more than 1.5 percentage points above standard. In the exchange rate, the convergence criteria require "the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years, without devaluing against the currency of any other Member State" (European Monetary Institute 1996).

The criterion for the participation in the exchange-rate mechanism of the European Monetary System refers to a country's ability to fulfill the exchange rate movement within the normal fluctuation margins provided. In the 1995 ECB report, "Progress Towards Convergence", it was recognized that the "normal fluctuation margins" were  $\pm 2.25$  percent around bilateral central parities. Previously, in 1993, a  $\pm 15$  percent band was allowed. From this experience, we can then propose some actions to be taken as an *ex post facto* example.

Of course, for the short term, all ASEAN countries must work hard together to achieve financial-system stability, which is the foundation for all development and progress. ASEAN should set up an organization to strengthen the monitoring of financial systems among the member countries. It is also important to do regional economic surveillance within a supranational framework. This will help member countries enhance their resilience to crises and cross-border contagion, and to foster growth by promoting sound financial systems and financial-sector diversity. The program will provide added value as the program work on the collaborative nature basis.

To achieve stability among the region's financial systems, ASEAN countries must prioritize stable macroeconomic growth, especially in the areas of exchange rate and inflation, as these variables are indicative of weakness and divergence. Closer policy coordination is necessary. ASEAN should initiate tight policy coordination in order to promote the same policy response in the macroeconomic and exchange-rate policies. The South East Asian Central Banks (SEACEN) can play a strategic role in this case as most ASEAN countries rely on their central banks to enforce monetary policy.

ASEAN should move forward to make the trading bloc arrangement more open and clear. A study by Frankel and Rose [2000] provides strong evidence that the effect of a monetary union on a country's trade is "stronger if the partner is one with whom one trades". This means increasing intra-ASEAN trade can facilitate better economic integration. Within the Chiang Mai Initiative (CMI), the People's Bank of China and Bank Indonesia signed a bilateral swap arrangement (BSA) that will provide short-term financial support to solve short-term exchange-rate problems. The CMI also urges the members (ASEAN plus China, Japan and Korea) to increase their surveillance processes. In the end, these will contribute to financial system stability and regional economic growth [Bank Indonesia 2005].

Given the present situation, however, ASEAN should dare to take the first step toward a monetary union. As we know, the weakness of a monetary union has to do with information sharing. In practice, information sharing has been done in the area of monetary policy, especially within SEACEN. Each member shares information on its own monetary policies and conditions with other members. A further step, called surveillance, had also been done especially on modeling crisis studies. However, at this stage, ASEAN still needs a stronger regional surveillance mechanism and, of course, a means of following up the surveillance results.

Eichengreen [1997] said that a monetary union is another solution to the problem of exchange-rate instability. For starters, it is very important for ASEAN to set up maximum movement of exchange rate among its members. It should be viewed as a starting point toward the "ASEAN Monetary Unit" (AMU) that would be a basis for further development. This exchange-rate coordination requires a more intense form of monetary cooperation. The AMU is quite similar to loosely pegging a certain currency as an anchor.

## **6. Conclusion**

Sustaining the rapid progress in the ASEAN economies requires further infrastructure. This paper aims to provide a tiny contribution toward making the ASEAN become a center for global growth and prosperity. The study found that the ASEAN economy is converging in the industrial and GDP categories but diverging in the monetary area, especially in exchange rate and price stability. As this reduces the possibility for a successful monetary union in terms of exchange rate or currency unification, ASEAN should dare to start a monetary union in a more modest form. As part of the preparations toward increasing economic integration as prescribed at the Bali Accord II, ASEAN should set convergence criteria for its members in terms of budget deficit, exchange rate, price stability, and money growth.

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