POSSIBLE USE OF REGIONAL MONETARY UNITS- IDENTIFICATION OF ISSUES FOR PRACTICAL USE

Final Report

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EXECUTIVE SUMMARY

In order to fulfill the objectives of identifying possible use of RMU in practical way, we did an in-depth interview to 18 people of experts who know this topic very well and they are the stake holders of RMU. Respondents of this research consist of six different groups, i.e: Bank Indonesia (2 respondents), Ministry of Finance (3 respondents), capital market player (3 respondents), banking sector (2 respondents), economists and expert (6 respondents) , and private sector (2 respondents). The following points summarized the result of in depth interview.

1. Practical use of RMUs for macroeconomic surveillance.

The implementation of RMU for macroeconomic surveillance in Indonesia is facing a hard track, since this is also related with other countries in the region. First, it is impossible to establish ASEAN's single market when even Indonesia's export commodities are mostly the substitutes to other ASEAN countries commodities. Second, Indonesia's economic condition is still left behind with the +3 countries and other ASEAN countries like Singapore, Malaysia, and Thailand. Finally, policy divergence in terms of monetary policy, fiscal policy, exchange rate regime, and economic structure, is also large among the ASEAN+3 countries which may complicate the synchronization process.

2. Official use and private use of RMUs as denominator of transactions

It is believed that the use of RMU in official transaction is still hard to apply. There are number of issues behind it. First, expected role of RMU, and second is economic disparity among country members. Lastly, is country's sovereignty. The implementation of RMU will alleviate policy making power in monetary, fiscal, and exchange rate.

Regarding the implementation of RMU for private use, the answers are varied. As indicator for competitiveness, the implementation of RMU for private use is easier to apply. It can be done simply by informing well the private sectors about the presence of RMU. However, if RMU is considered to take more advanced role like denomination in transaction, private capital/bonds market, or banking activities, the implementation will be more difficult.

3. Design a roadmap to the use of RMUs

In the roadmap, our respondents assumed that RMU will be implemented as surveillance and relative competitiveness indicator first, and then followed by unit of account and medium of exchange. RMU is a more advanced and committed surveillance indicator. If peer's pressure still can be denied somehow, RMU gives openness to the public that anyone can see whenever the divergence appears. As noted before, RMU would make the data that previously enclosed to the public able to be seen transparently now. Consequently, all member countries will no longer have independency in intervening exchange rate market and in terms of monetary or fiscal policy which both have direct effect to RMU

Some other issue also arise when RMU will be used as one of indicators for surveillance mechanism such as what currency to be included, what currency chosen as an anchor, how the weight is determined and the transparency of the exchange data among countries.

This study also shows that pessimism is still spreading out regarding the implementation of RMU in Indonesia. Most of the respondents argued that ACU would be less success than ECU. The high degree of heterogeneity in ASEAN+3 countries would make the synchronization process for ACU harder than ECU. This divergence will imply in varied necessity in policy level among the

members which complicates the policy coordination for RMU. Still, RMU is possible and concrete to be applied, but not in the short run. Undeniably current Rupiah's appreciations to US Dollar as the Fed's policy to print out more US Dollar, and the global financial crisis have made US Dollar losing its credibility. This would serve a good momentum for arising RMU's issue.

Besides in depth interview analysis, we also did secondary data analysis. Secondary data analysis showed that Indonesian CMI nominal tend to diverge from AMU. The divergence especially happened since 2005, when Indonesia experiencing structural break according to the extreme rise of gasoline price. In period 2008-2009, Indonesia/AMU exchange rate tend to appreciate, but in period 2010, Indonesia/AMU exchange rate was relatively stable. In terms of volatility, the volatility of Rupiah/AMU was smaller than volatility of Rupiah/USD since 2006. It can be the starting point for Indonesia to consider RMU in its exchange rate policy.


We proposed the roadmap of RMU implementation as follow. If the study has confirmed the benefits of RMU, the next step is creating public awareness. Intense socialization to the public is substantial to bring up the public stigma regarding the implementation of RMU. Meanwhile, an institution focusing on RMU, legal framework and settlement process of RMU need to be set up (institutionally prepared). Additionally, good quality and openness of data, which still don't happen in most member countries, are needed for calculating RMU. Symmetric information among member is very important. Also noted to implement RMU successfully, the member countries should have sound economic development and stable political condition. Thus they will implement RMU right in time, not premature. To achieve that, +3 countries should note the importance of financial supports to elevate other countries. Then international trade and investment among the member countries should be strengthened to make the implementation of RMU worthy. Regarding the large policy divergence among ASEAN+3 countries, common platform should be formulated through the consensus (harmonizing the divergence).Lastly, the implementation should be done gradually. For example, Singapore, China, Japan, and Korea might be the founding fathers for RMU. Then in 2015, it would be followed by Indonesia, Malaysia, Philippines, and Thailand. Vietnam will catch up in 2020. Lastly, Cambodia and Laos can join some years later.

I.BACKGROUND

It is observed that East Asian countries show faster recovery after the recent crisis and this would warrant further need to deepen the economic cooperation and financial market development for further regional development. As part of an initiative to move towards greater financial stability in Asian region, a Regional Monetary Unit (RMU) was proposed for ASEAN+3 nations. RMU is a basket of currencies of Asian countries against non Asian counties, especially the US dollar or Euro. Since the RMU is a basket of currencies of Asian countries, it can be used as an indicator to show how Asian currencies are moving collectively against external currencies such as the US dollar or the euro. RMU is one of the forms of currency coordination.

Current issue of currency war has also increased the needs of currency coordination. The terms of currency war raised by Brazil Presidents (in 2010) noticed that many countries in the world now tends to undervalue their currency. It has the objective to increase their competitiveness in terms of exports (*competitive devaluation*).

Graph 1 : Real Effective Exchange Rate of Several Countries, January 2007-September 2010
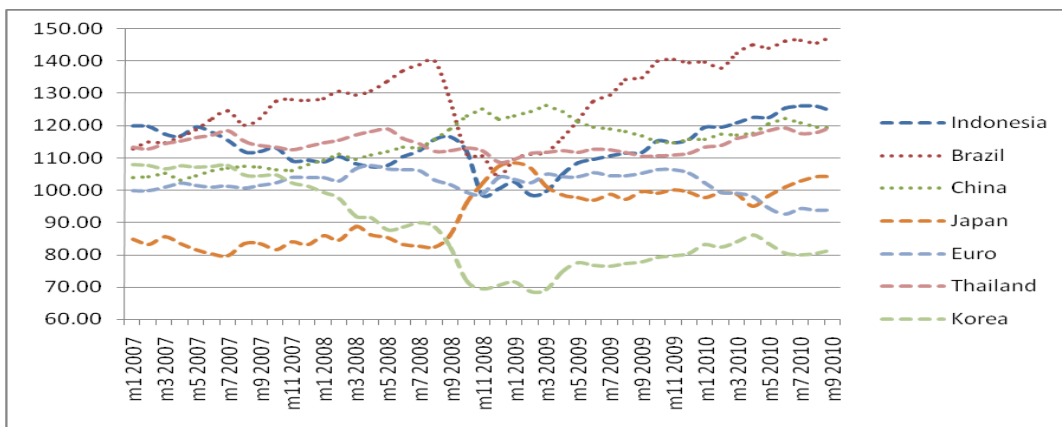
Source : CEIC

Graph 2: Broad USD Index (Nominal and Real), 2005-2010
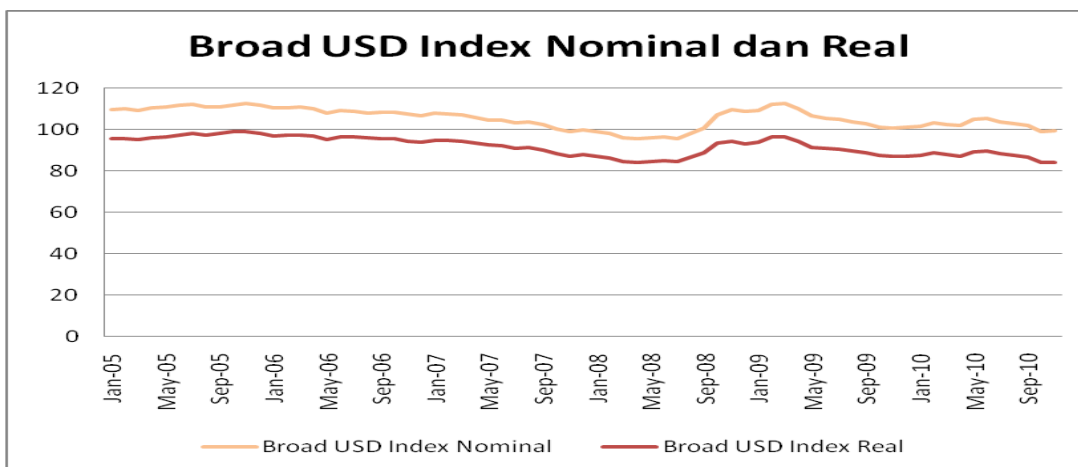
Source : CEIC

The possibility of currency war is shown by Graph 1 and Graph 2. Because of capital inflow to emerging markets (Indonesia, Thailand, Korea, Brazil, China), the real exchange rate appreciation is the result. But the rates of appreciation tend to be slowly in the year 2010. The

opposite case is for Euro and United States which their real exchange rate tends to be depreciating in real terms. Many countries in the world are now tend to avoid real exchange rate appreciation to gain competitiveness in handling global imbalances related with the surges of China's product in world market. United States policy called quantitative easing is one of the evidence for old theory of currency depreciation to get competitiveness (*competitive devaluation*). United States argue that this policy is to correct global imbalances caused by China's undervaluation of yuan.

The Asian crisis 1997 and Global crisis 2007 (with side effect of currency war) have strengthened the needs of closer regional cooperation in financial sector. According to Singh (2010), to face current global imbalances, we need to increase global coordination, including coordination in exchange rate. In conclusion, the proposal of regional monetary unit is in line with the current conditions.

II.RESEARCH OBJECTIVES

The objectives of this study are as follows:

1. Propose the practical use of RMUs for macroeconomic surveillance
2. Propose the official use and private use of RMUs as denominator of transactions
3. Design a roadmap to the use of RMUs

The task of the UI team is to examine the possibility of using RMU for macroeconomic surveillance, the official use and private use of RMU as denominator of transaction in Indonesia. The UI team has to find out what would be the barrier of using the RMU in Indonesia and what institutions have been established and what institution should be established in order to smooth the using RMU in Indonesia. Base on the presence Indonesian condition, design a roadmap to the use of RMUs in Indonesia.

III.LITERATURE STUDY

3.1 European Experience

The European experience in establishing a European unit of account (EUA) during the "monetary snake" of the early 1970s, creating the European Monetary System (EMS) and the European Currency Unit (ECU) in 1979, and forming the European Monetary Union (EMU) with the birth of the euro as a new regional currency in 1999, provide relevant lessons for the creation of the ACU (Committee for the Study of Monetary Union 1989; European Economy 1990). 3 Indeed, during those three decades, the European experience was particularly rich both in using the ECU for currency market monitoring as well as for serving as the denomination for the issuance of bonds.

There are several factors that determine the weight in RCU. According to ECU, the factors were percent of GNP, percent of intra EC trade, and percent of EC financial support. The table below shows the economic importance of member countries and weights of currency components in the ECU after 1989. In practice, the weights did not exactly fit the economic importance because they fluctuated whenever the exchange rates changed. The weights of the currencies are thus subject to reexamination. In fact, the procedure for reexamining the weights of the currencies in the basket is twofold. One is a periodic reexamination, the first of which took place 6 months after the start of the system. Subsequent reexaminations were scheduled to take place every five years. The other is reexamination upon request, if the weight of any currency has changed by 25 percent or more. After the launch of the EMS, there were two revisions made to the weights, one in 1984 when Greece decided to join the EMS and another in 1989 when Spain and Portugal entered into the EMS. In 1993 when the Treaty on European Union entered into force, however, the weights were frozen in preparation for the introduction of a single currency.

	Percent of EC GNP	Percent of Intra EC Trade	Percent of EC financial support	Weights after 1989 revision
DEM	26.2	24.9	19.51	30.10
FRF	20.5	16.9	19.51	19.00
GBP	15.5	12.7	19.51	13.00
ITL	17.6	12.1	13.00	10.15
NLG	5.0	11.8	6.50	9.40
BLF*	3.4	10.9	6.50	7.90
DKK	2.4	2.4	2.91	2.45
IEP	0.7	1.9	1.12	1.10
GRD	1.1	1.0	1.68	0.80
ESP	6.7	4.2	8.13	5.30
PTE	0.8	1.3	1.63	0.80

Note *: The weight of the Luxembourg franc was integrated into the Belgium franc.

Source : Woosik, et. al. (2007)

Europe Experience in issuing ECU Bond

Giradin and Steinherr (2008) note that European Monetary System (EMS) started to operate on 13 March 1979, the definition of the ECU coincided with the definition of the European unit of account (EUA). The EUA was a "closed" basket of fixed quantities of the nine European Community (EC) currencies. ECU was defined as an "open" basket. The resolution of the EEC Council of 5 December 1978 stipulated that "the weights of the currencies in the ECU will be re-examined and, if necessary, revised within a period of six months of the entry into force of the system and thereafter every five years or, on request, if the weight of a currency has changed by 25%." They also quote that Section 2 of the EEC Regulation of 18 December 1978 provides for the possibility that the Council fixes the terms under which the composition of the ECU could be modified: for example, in the event of inclusion of new countries within the system. In the five year period 1979–1984 the composition of the ECU changed as a consequence of the devaluation or revaluation of component currencies, even if none of the weights changed by more than 25%. Variations of the exchange rates were particularly wide only in the initial period of the EMS during which inflation rates diverged substantially.

According to Giradin and Steinherr (2008), the initial composition of ECU is:

Table 2 Initial Composition of the ECU

Country	Amounts in National Currency	Economic Shares	Effective Shares		
			Sep-74	Mar-79	Mar-83
Germany	0.828	25	26.4	33	37.38
France	1.15	20.2	20.5	19.8	16.93
UK	0.0885	17.9	27.4	13.6	14.05
Netherlands	0.286	7.9	9	10.5	11.46
Italy	109	13	14	9.5	7.86
Belgium & Luxemburg	3.8	10	8.2	9.5	8.57
Denmark	0.217	3	3	3	2.7
Ireland	0.00759	1.5	1.1	1.1	1.06

Source: Gros and Thygesen (1998); Van Ypersele (1989) in Girardin and Steinherr (2008)

Then, ECU weights change as follows:

Tabel 3 First Revision of the Composition of the ECU

Countries	Amounts in National Currency	Economic Shares	Efective Shares		
			Sep-74	Mar-79	Mar-83
Germany	0.828	25	26.4	33	37.38
France	1.15	20.2	20.5	19.8	16.93
UK	0.0885	17.9	27.4	13.6	14.05
Netherlands	0.286	7.9	9	10.5	11.46
Italy	109	13	14	9.5	7.86
Belgium & Luxemburg	3.8	10	8.2	9.5	8.57
Denmark	0.217	3	3	3	2.7
Ireland	0.00759	1.5	1.1	1.1	1.06

Source: Gros and Thygesen (1998); Van Ypersele (1989) in Girardin and Steinherr (2008)

Then, the second change of ECU weight is:

Tabel 4 Second Revision of the Composition of the ECU, September 1989

Weight revision Sept 1989	Economic Shares	Share Sept 1989	Share Dec 1996
Germany	23.8	30.3	32
France	18.4	19	20.3
UK	16.3	12.9	11.9
Netherlands	8.4	9.4	10.1
Italy	13.7	10.7	7.9
Belgium & Luxemburg	6.9	7.9	8.5
Denmark	2.5	2.5	2.7
Ireland	1.3	1.1	1.1
Greece	1.3	0.8	0.5
Spain	6.1	5.3	4.2
Portugal	1.1	0.8	0.7

Source: Gros and Thygesen (1998); Van Ypersele (1989) in Girardin and Steinherr (2008)

The history of monetary integration in Europe shows the process of monetary integration as follows[1]: Macroeconomic policy coordination and exchange rate cooperation → introduction of a common exchange rate system → monetary union.

> ➤ *Policy Coordination and Exchange Rate Cooperation*

European countries established the EC finance ministers' meeting (ECOFIN) and the Committee of Governors of the Central Banks (CGCB) to coordinate issues of exchange rate management and international monetary policy in the late 1950s. These institutions have functioned as channels to share important macroeconomic information among the nations, though policy coordination was not very successful due to conflicts of interest.

> ➤ *A Common Exchange Rate Mechanism*

European countries created the European Monetary Cooperation Fund to provide a mutual credit facility for intervention in the foreign currency market. This fund was a necessary precondition for stabilizing the exchange rate. The first system for a common exchange rate was

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[1] Kyung Tae Lee and Deok Ryong Yoon, 2007, A Roadmap for East Asian Monetary Integration: The Necessary First Step, p. 24

the so called snake system. This system was established after the international monetary turbulences of the early 1970s and the collapse of the Bretton Woods system. The volatile exchange rates caused by the collapse of the Bretton Woods system made the EC countries concerned about the difficulties in maintaining a common agricultural policy. The European countries introduced an exchange rate mechanism allowing a maximum total band of 2.25 percent against the EC currencies, using the dollar as an anchor currency. In this system, the European currencies were inter related through the dollar and were allowed to fluctuate within the given bands around the dollar. This exchange rate mechanism was called the snake in the tunnel, because the EC countries had to maintain the band between the European currencies as well as to the dollar. However, it was not able to maintain this band and keep the band to the dollar at the same time. Many countries such as Denmark, France, Ireland, Italy and the UK had to leave and come back repeatedly to the arrangement.

The second common exchange rate system was the European Monetary System (EMS). The EMS was initiated by the Franco German alliance between French president Giscard d'Estaing and German chancellor Helmut Schmidt. The EMS was designed in the course of 1978 and became operational in 1979. The EMS has a similar structure to the snake system with a fixed exchange rate system allowing fluctuations within a band between European currencies. However, the European currencies had to pay attention to the internal exchange rate between themselves only because the EMS had created a composite currency — the European Currency Unit (ECU) — as its anchor currency. This relieved the participating countries of the burden of maintaining direct parity with a currency outside the EC, the dollar. The EMS improved the institutional rules for realignments and the backing finance facilities for exchange market intervention.
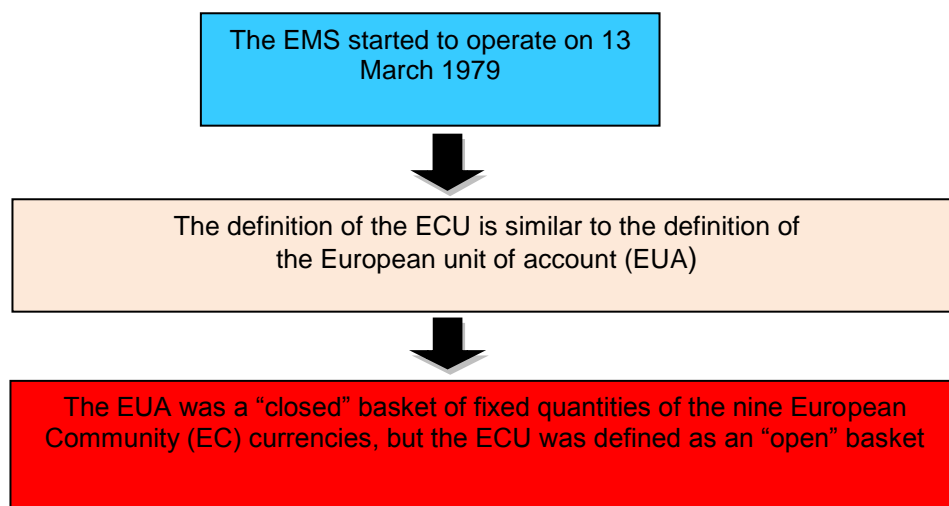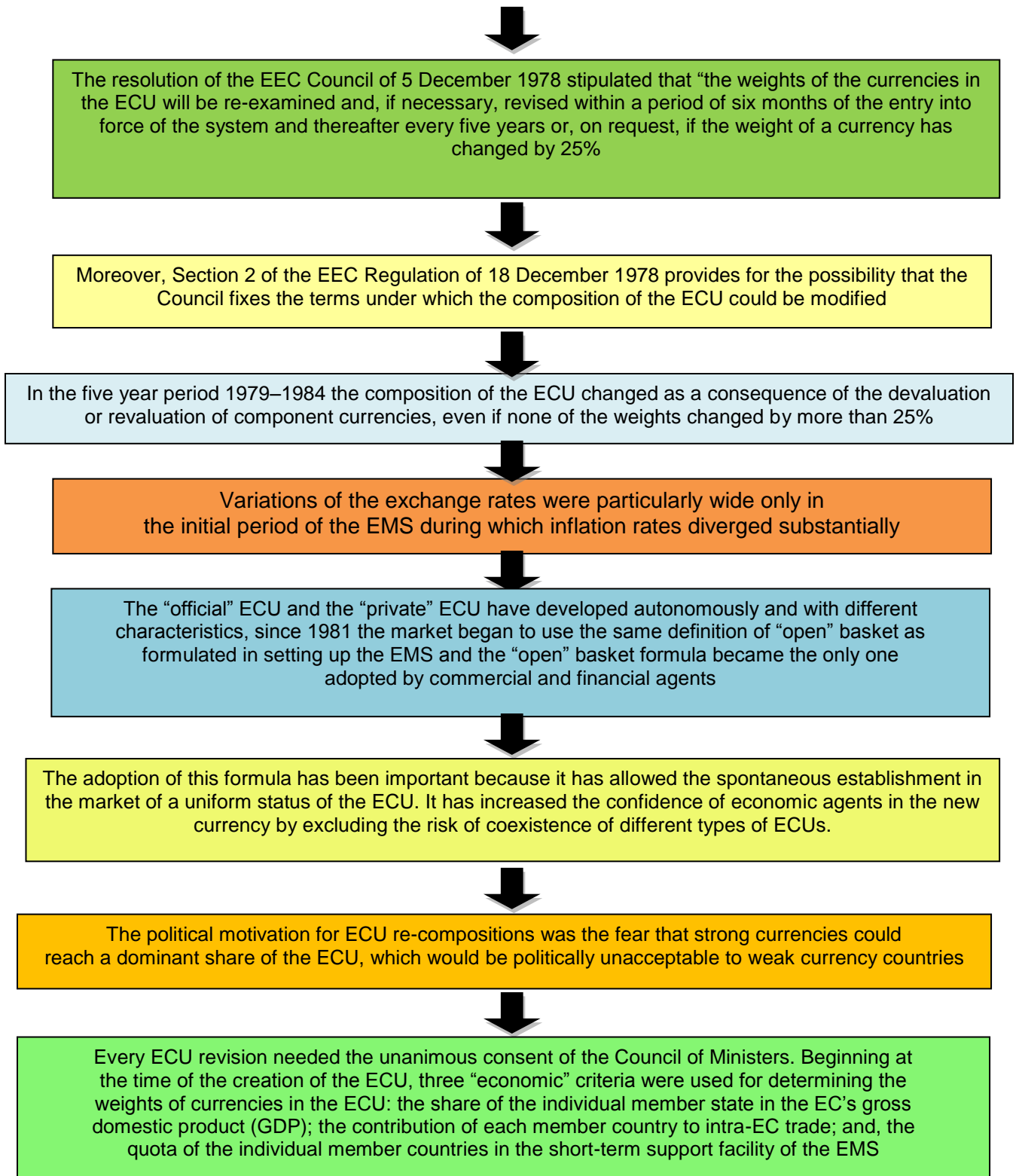
➢ *Monetary Union*

At the Hanover summit of June 1988, the Council appointed Delors Committee to design further moves beyond EMS. The Delors report recommended the move to monetary integration. This report contains three major stages to reach EMU. The summit in Madrid in June 1989 decided to proceed the economic and monetary union on the basis of the proposals in the Delors plan and to start the first stage on July 1 1990.

The first stage was to strengthen the role of the Committee of Central Banks in monitoring and consulting each other on monetary policies. All the countries were to participate in the EMS at the first stage. In the second stage the Europen Monetary Institute (EMI) was to be established in the spirit of US Federal Reserve System. The EMI was the predecessor of the Euroepan Centarl Bank. Member states were to meet convergence criteria incorporated in the Treaty of Maastricht to achieve more stable and uniform development within the group.

The third stage would create the European Central Bank (ECB). National countries would transfer the authority of national monetary policy to the ECB. The members introduced a single regional currency, the euro on January 1, 1999. The exchange rate of national currencies of EU member states were fixed vis à vis the euro. The euro existed only as book money until January 1, 2002, when the euro banknotes and coins were put into circulation.

The process could be described this chart as follows.

Figure 1 : The Process of ECU

The EMS started to operate on 13 March 1979

The definition of the ECU is similar to the definition of the European unit of account (EUA)

The EUA was a "closed" basket of fixed quantities of the nine European Community (EC) currencies, but the ECU was defined as an "open" basket

The resolution of the EEC Council of 5 December 1978 stipulated that "the weights of the currencies in the ECU will be re-examined and, if necessary, revised within a period of six months of the entry into force of the system and thereafter every five years or, on request, if the weight of a currency has changed by 25%

Moreover, Section 2 of the EEC Regulation of 18 December 1978 provides for the possibility that the Council fixes the terms under which the composition of the ECU could be modified

In the five year period 1979–1984 the composition of the ECU changed as a consequence of the devaluation or revaluation of component currencies, even if none of the weights changed by more than 25%

Variations of the exchange rates were particularly wide only in the initial period of the EMS during which inflation rates diverged substantially

The "official" ECU and the "private" ECU have developed autonomously and with different characteristics, since 1981 the market began to use the same definition of "open" basket as formulated in setting up the EMS and the "open" basket formula became the only one adopted by commercial and financial agents

The adoption of this formula has been important because it has allowed the spontaneous establishment in the market of a uniform status of the ECU. It has increased the confidence of economic agents in the new currency by excluding the risk of coexistence of different types of ECUs.

The political motivation for ECU re-compositions was the fear that strong currencies could reach a dominant share of the ECU, which would be politically unacceptable to weak currency countries

Every ECU revision needed the unanimous consent of the Council of Ministers. Beginning at the time of the creation of the ECU, three "economic" criteria were used for determining the weights of currencies in the ECU: the share of the individual member state in the EC's gross domestic product (GDP); the contribution of each member country to intra-EC trade; and, the quota of the individual member countries in the short-term support facility of the EMS
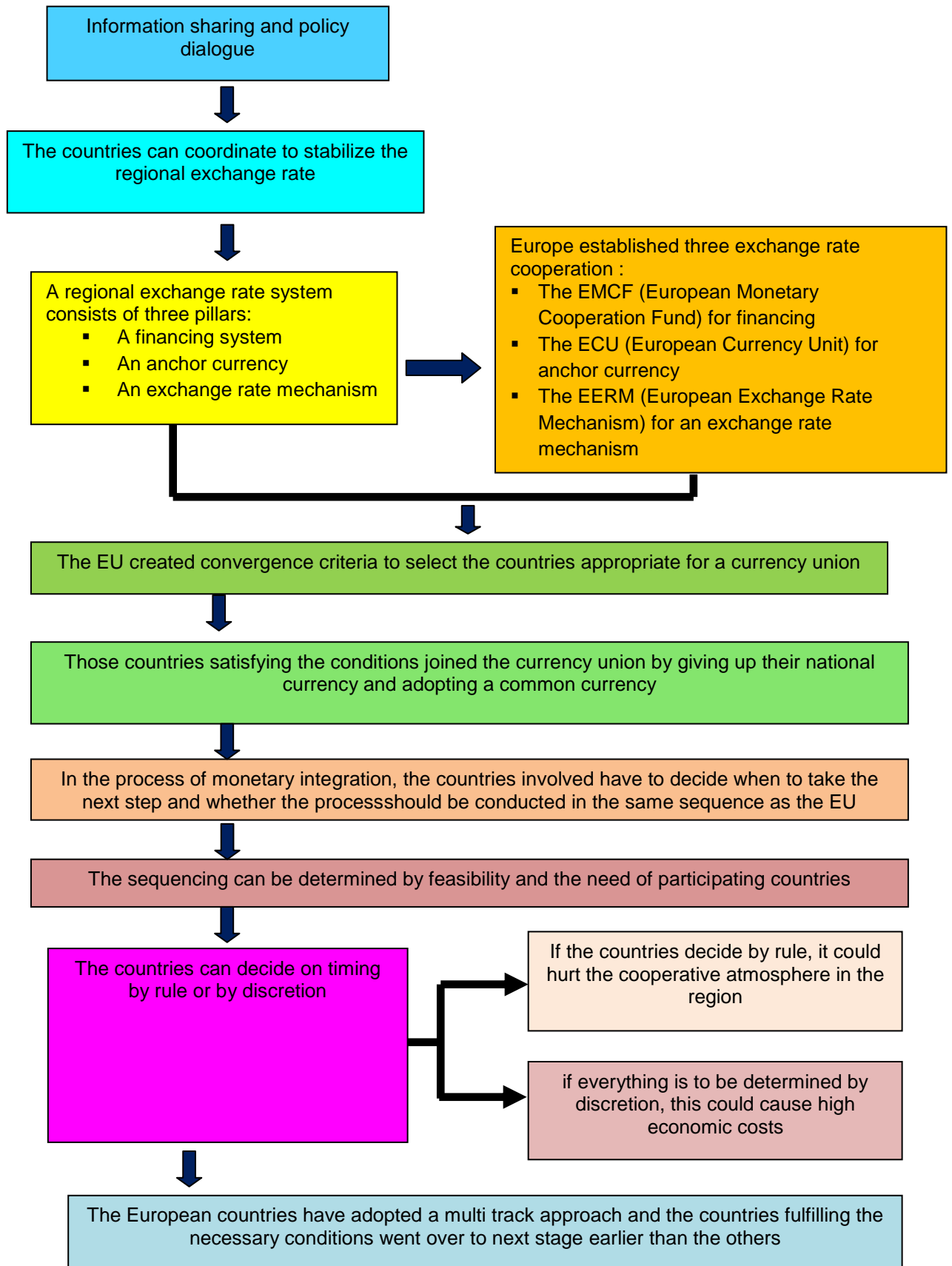
Notes : Summarized form Eric Girardin and Alfred Steinherr, 2008, Regional Monetary Units for East Asia: Lessons from Europe, p. 6-7

Figure 2 : Major Components of a Roadmap The ECU (European Currency Unit)

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┌─────────────────────────────────────┐
│ Information sharing and policy       │
│ dialogue                             │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│ The countries can coordinate to      │
│ stabilize the regional exchange rate │
└─────────────────────────────────────┘
                 │
                 ▼
┌──────────────────────────────┐        ┌──────────────────────────────────────┐
│ A regional exchange rate      │        │ Europe established three exchange rate │
│ system consists of three      │        │ cooperation :                          │
│ pillars:                      │───────▶│  ▪ The EMCF (European Monetary         │
│   ▪ A financing system        │        │    Cooperation Fund) for financing     │
│   ▪ An anchor currency        │        │  ▪ The ECU (European Currency Unit)    │
│   ▪ An exchange rate          │        │    for anchor currency                 │
│     mechanism                 │        │  ▪ The EERM (European Exchange Rate    │
│                               │        │    Mechanism) for an exchange rate     │
│                               │        │    mechanism                           │
└──────────────────────────────┘        └──────────────────────────────────────┘
                 │                                         │
                 └──────────────────┬──────────────────────┘
                                    ▼
┌──────────────────────────────────────────────────────────────────────────────┐
│ The EU created convergence criteria to select the countries appropriate for a   │
│ currency union                                                                  │
└──────────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌──────────────────────────────────────────────────────────────────────────────┐
│ Those countries satisfying the conditions joined the currency union by giving up │
│ their national currency and adopting a common currency                          │
└──────────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌──────────────────────────────────────────────────────────────────────────────┐
│ In the process of monetary integration, the countries involved have to decide   │
│ when to take the next step and whether the processshould be conducted in the     │
│ same sequence as the EU                                                         │
└──────────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌──────────────────────────────────────────────────────────────────────────────┐
│ The sequencing can be determined by feasibility and the need of participating   │
│ countries                                                                       │
└──────────────────────────────────────────────────────────────────────────────┘
                                    │
                                    ▼
┌──────────────────────────────┐        ┌──────────────────────────────────────┐
│                               │        │ If the countries decide by rule, it   │
│                               │───────▶│ could hurt the cooperative atmosphere │
│ The countries can decide on   │        │ in the region                          │
│ timing by rule or by          │        └──────────────────────────────────────┘
│ discretion                    │        ┌──────────────────────────────────────┐
│                               │───────▶│ if everything is to be determined by   │
│                               │        │ discretion, this could cause high      │
│                               │        │ economic costs                         │
└──────────────────────────────┘        └──────────────────────────────────────┘
                 │
                 ▼
┌──────────────────────────────────────────────────────────────────────────────┐
│ The European countries have adopted a multi track approach and the countries    │
│ fulfilling the necessary conditions went over to next stage earlier than the     │
│ others                                                                          │
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Summarized from : Kyung Tae Lee and Deok Ryong Yoon, 2007, A Roadmap for East Asian Monetary Integration: The Necessary First Step, p. 27-28

Constructing An Asian Currency Unit (ACU) From European Currency Unit (ECU) Experience

According to Girardin and Steinherr (2008), the European experience in establishing a European unit of account (EUA) during the "monetary snake" of the early 1970s, creating the European Monetary System (EMS) and the European Currency Unit (ECU) in 1979, and forming the European Monetary Union (EMU) with the birth of the euro as a new regional currency in 1999, provide relevant lessons for the creation of the ACU (Committee for the Study of Monetary Union 1989; European Economy 1990). Indeed, during those three decades, the European experience was particularly rich both in using the ECU for currency market monitoring as well as for serving as the denomination for the issuance of bonds.

Once the ECU was created with the stamp of official approval, it became a standardized and certified unit, with well-defined rules for changing the composition of the basket. Hence, this standardization gave the ECU a superior status to all other baskets. In principle, any investor could design a portfolio of securities in various currencies corresponding to his preferences. The ECU basket did not correspond to such optimal individual preferences. But it was unique through standardization. This brought benefits in terms of recognition and tradability. The financial industry leaped on this standardized basket for the issuance of securities with an interesting feature of risk diversification.

In the case of the ECU another issue had created considerable confusion. Market participants assumed that the value of the ECU had to be equal to the weighted average of the basket. However, this is only the case if some mechanism exists that ensures equality. The definition alone will not achieve that. During the early years of the ECU, the ECU Banking Association (EBA) set up a system making payments in ECU possible. Payments could be made either in ECU or with the basket. This ensured that the value differential was constrained by the transaction costs of delivering component currencies. Because it was difficult to get at low cost currencies with capital controls, the system was discontinued and payment had to be made in ECU. With this decision, the link between the ECU and the basket was taken away. In the EMS crisis of 1992, the differential reached a record of close to 10%, whereas transaction costs for basket payments to cover large positions were less than 0.5%. Therefore, it is necessary to decide what ties the value of the ACU to its basket. One way to do it is via the payments system as during the initial years of the EBA. Another is that one or several central banks, or a special purpose fund backed by all central banks in the ACU area, intervene to tie the value of the ACU to the basket.[2]

The ECU was created as a reference currency for the EMS of fixed (but adjustable) exchange rates. This may raise the question whether the success of the ECU was not conditioned by the EMS. The ACU basket would contain currencies some of which have fixed

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[2] Eric Girardin and Alfred Steinherr, 2008, Regional Monetary Units for East Asia: Lessons from Europe, p. 4

exchange rates, other are floating with various degrees of management. It needs to be recognized that the EMS, although based on the ECU, did not in its functioning or performance depend on the ECU. Nor did the ECU in an essential way depend on the EMS. The ECU benefited from the official definition and recognition but not from the fixed exchange rate system.

Because a basket currency is a standardized diversified portfolio, it has all the advantages (never the worst performance) and disadvantages (never the best performance) of any diversified portfolio. The greater the volatility of the portfolio's components, the larger will be the gains. From this vantage point, flexible exchange rates are not a problem. Quite the contrary: greater volatility provides larger gains for risk-averse holders of ACU assets or liabilities.

> **Change The Regime in The ECU Experience**

According to Girardin and Steinherr (2008), at the beginning and at the end of the ECU experience there were regime changes. Before the ECU was created, European institutions needed a unit of account for keeping their books and for defining their contractual responsibilities. To that end, the EUA was created. It was not a currency but a simple unit of account. Initially (28 June 1974), one EUA was set equal to one special drawing right. At the time of the creation of the EMS in 1979, the ECU took over the defining characteristics of the EUA on a 1:1 basis. However, the name was changed to signal the creation of a currency. Also EUA is unpronounceable as a word. ECU had the advantage of being pronounceable and of recalling a currency that existed in French history.

As Europe refused to let the market decide through a parallel currency approach, the decision to create a single currency was political and happened on a day decided and announced well in advance. On that day, the ECU was converted 1:1 into the euro. In other words, the choice of value for the euro was completely free. It could have been anything: one euro equal to one deutschmark or one Lira or one US dollar. The obvious choice was to define it equal to one ECU. As the ECU had a value in terms of each component currency the value of the euro in terms of all other currencies was fixed automatically. To avoid having countries aim at entering the euro regime with undervalued exchange rates, the Maastricht Treaty required that no exchange rate adjustment was allowed two years prior to the regime change. Although the fluctuation bands around central parities were widened in August 1993 to 15% as a consequence of the EMS crisis, the terminal condition of euro conversion brought about convergence of the exchange rates to their central parities as predicted by theory.

As this experience indicates, the initial launching of a fixed-currency-units ACU, left many options open for later development: ACU membership can evolve, the ACU could be hardened (by stopping at some point basket revisions), or a hard ACU could be adopted. Such a hard ACU could be basket-based or made independent of the basket. Or the basket ACU could be turned into a non-basket Asian currency. Clearly, one big advantage of the basket construction can be seen in its flexibility.

Divergence Indicators For Currency Market Monitoring

When conditions for the participation in the EMU were laid down in the Maastricht Treaty, the relevant convergence indicators (just the opposite of divergence indicators) were the following: first, stability of the nominal exchange rate parity for a certain minimum time (2 years); second, long-run interest rates and inflation rates had to be within 2 percentage points of the average of the lowest three in the European Union; and, third, the fiscal deficit had to be less than 3% of GDP and public debt less than 60% of GDP. The fiscal criteria were then taken over in the Growth and Stability Pact which provides rules for those countries which are EMU members.

According to Girardin and Steinherr (2008), the divergence indicator was useful but, in actual operations, less than what was hoped for. There are basically three explanatory factors. First, group pressure was more effective on small rather than large countries. This will in all likelihood also be the case in other parts of the world, particularly with decisions as sensitive as the question of whether a devaluation is necessary and by how much? Second, as in the Bretton-Woods system, the pressure for adjustment was always on the weaker currencies and not on the

strong currencies. This is an imminent structural problem of fixed exchange rate systems. Third, many countries did indeed observe the divergence indicator and intervened such as to avoid reaching the alarm benchmark. This last argument therefore suggests that the divergence indicator worked "behind the scenes." A more general limitation of the divergence indicator was that although in theory, the ECU was the reference currency of the EMS, in practice, the deutschmark occupied that role. Participating countries were therefore more focused on the bilateral deutschmark rate than on the ECU rate.

The mechanism for coordination is the divergence indicator, which signals any currency's departure from the weighted average. This could be seen as a presumption that the monetary authorities of the diverging country should take action
to limit the gap. This was indeed the stated aim within the EMS. But the European experience does not provide much comfort that it will work. In Europe, policy coordination was achieved but through a very different mechanism. It was based on the Exchange Rate Mechanism (ERM) of the EMS, in which the ECU played no role. The divergence indicator turned out to be largely ignored. Policy coordination in Europe was based on explicit commitments (bilateral parity pegs, automatic and theoretically unlimited mutual support, consensus on realignments) that significantly reduced the margin for maneuver of national central banks. The question, then, is whether the Asian countries are willing to move to a tighter form of policy coordination. Even ignoring the deep issue of national sovereignty, the case must be made that it is desirable and possible.[3]

3.2 Asian Case

Following the agreement on the Chiang Mai Initiative Multilateralization (CMIM) on May 3, 2009 in Bali, Indonesia, a new regional currency unit (AMU-cmi) was created. The AMU-cmi currency basket is composed of 13 AMU currencies plus the Hong Kong dollar, bringing the total to 14 currencies.

The monetary authorities of East Asian countries have been strengthening their regional monetary cooperation since the Asian currency crisis of 1997. This monetary cooperation after the crisis resulted in the Chiang Mai Initiative (CMI), which was established by the ASEAN + 3 (Japan, South Korea, and China) as a network of bilateral and multilateral swap arrangements to deal with a currency crisis in member countries. Under the CMI, the monetary authorities should conduct surveillance to prevent a currency crisis in the future.

Based on research by *Chai, Moon, Rhae, Yoon (2008)* In terms of GDP based on PPP-value in 2000, the weights of China, Japan, and Korea are respectively 46.14%, 31.51%, and 6.83%. Since 1 RMU is set to be $1.00 at the benchmark year of 2000, this means that 1 RMU includes the Chinese yuan equal to $0.4614, the Japanese yen equal to $0.3151, the Korean won equal to $0.0683, as well as other currencies.

In 2000, the exchange rate of the Chinese yuan against the US dollar was $1 =8.3 yuan, and 3.83 (= 8.3_0.4614) units of the Chinese currency are 1 RMU. Likewise, 33.97 (= 107.8_0.3151) units of the Japanese currency or 77.26 (=1130.6_0.0683) units of the Korean currency are 1 RMU.

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[3] Charles Wyplosz, 2010, An Asian Monetary Unit? The Graduate Institute, Geneva, p. 2-3

Table 5: Weights and Amounts of Asian Currency in RMU, 2000

	weight (%)	exchange rate/$	Currency amount
Korea	6.83 (6.29)	1130.6	77.26
Japan	31.51 (25.51)	107.8	33.97
China	46.14 (53.33)	8.3	3.83
Singapore	0.90 (0.86)	1.7	0.02
Thailand	3.69 (3.55)	40.1	1.48
Philippines	2.92 (2.94)	44.2	1.29
Malaysia	1.99 (1.62)	3.8	0.08
Indonesia	6.02 (5.88)	8421.8	506.59

Source : *Chai, Hee-Yul. et.al., (2008).*

They also summarize the possible use of RMU in official and private use as follows:

Figure 3: Possible use of RMU
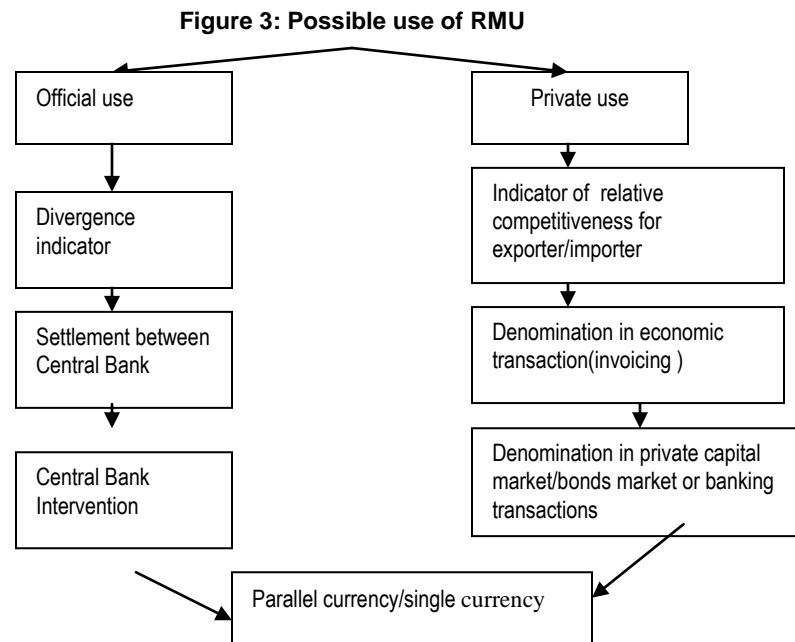
Source : *Chai, Hee-Yul. et.al., (2008); authors summary*

Ogawa and Shimizu (2006), also propose the AMU with the calculation as follow. They choose the ASEAN10+3 currencies as the component currencies of the AMU. The ASEAN10+3 is composed of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam, Japan, South Korea, and China. They calculate the AMU according to the method used to calculate the ECU under the EMS prior to the introduction of the euro in 1999. In the same way that the ECU was defined as a basket of currencies of EU member countries, the AMU is defined as a basket currency of the ASEAN10+3 countries. The weight of each currency in the basket is based on both the countries' respective shares of GDP measured at Purchasing Power Parity (PPP), and trade volumes (the sum of exports and imports) in the total of sampled countries for the relevant country. They calculate the countries' shares of GDP measured at PPP and their trade volumes for the most recent three years average as the currency shares of the AMU (the current version is based on 2005-2007). The average for the most recent three years for which data is available is used to calculate the currency shares in order to reflect the most recent trade relationships and economic conditions of the 13 East Asian countries for calculation of the AMU.

They quote the value of the AMU in terms of a weighted average of the US dollar and the euro because both the United States and EU countries are important trading partners for East Asia. The weighted average of the US dollar and the euro (hereafter, US$-euro) is based on the East Asian countries' trade volumes with the United States and the euro area. The weights on the US dollar and the euro are set at 65% and 35%, respectively.

Next, they choose a benchmark period in order to calculate AMU Deviation Indicators. The benchmark period is defined as the following: the total trade balance of member countries, the total trade balance of the member countries (excluding Japan) with Japan, and the total trade balance of member countries with the rest of world should be relatively close to zero.

Table 6. Trade Accounts of ASEAN10 + 3(Japan, South Korea & China)

millions of US$		
	With Japan*	Within ASEAN+3	With world
1990	(23,437)	(1,695)	35,814
1991	(33,084)	(4,666)	56,599
1992	(41,172)	(811)	87,582
1993	(54,184)	(4,940)	86,698
1994	(65,089)	9,572	95,364
1995	(73,856)	14,672	61,450
1996	(59,680)	12,278	7,639
1997	(54,531)	26,484	83,680
1998	(29,802)	12,131	231,587
1999	(32,065)	4,819	215,785
2000	(38,676)	2,365	181,164
2001	(23,997)	1,953	123,959
2002	(40,063)	12,966	162,818
2003	(55,834)	37,488	195,760
2004	(73,130)	47,816	227,571
2005	(67,135)	61,800	264,315
2006	(74,037)	61,840	327,093
2007	(84,267)	119,411	445,281

(Notes) All figures are calculated by authors. Trade data from DOT(IMF) and GDP
They use DOTS data of "China,P.R.:Mainland" and "China,P.R.:Hong Kong" as data of
* China.
The trade account with Japan is the total amount of the trade accounts with 12 East Asian
** countries.

Source : RIETI

Table 6, which shows the trade accounts of the 13 East Asian countries from 1990 to 2007, indicates that the trade accounts were the closest to balance in 2001. Assuming a one-year time lag before changes in exchange rates affect trade volumes, they choose 2000 and 2001 as the benchmark period. For the benchmark period, the exchange rate of the AMU in terms of the US$-euro is set at unity. We define the exchange rate of each East Asian currency in terms of the AMU during the benchmark period as the Benchmark Exchange Rate.

In summary, the AMU weights are calculated based on both the arithmetic shares of trade volumes and GDP measured at PPP (average of latest three years). The Benchmark Exchange Rate for each currency is defined in terms of the AMU during 2000-2001. Table 7 shows the AMU

weights as well as trade volume, GDP measured at PPP, arithmetic shares, and the Benchmark Exchange Rates.

Table 7 AMU shares and weights of East Asian Currencies

(Revised in 10/2009****, benchmark year = 2000/2001)

	Trade Volume* %	GDP measures at PPP**, %	Arithmetic average shares %	Benchmark exchange rate***	AMU weights
			(a)	(b)	(a)/(b)
Brunei	0.33	0.14	0.23	0.589114	0.0039
Cambodia	0.15	0.17	0.16	0.00027	5.8666
China	26.08	44.97	35.53	0.125109	2.8395
Indonesia	5.27	5.61	5.4	0.000113	477.8761
Japan	23.12	29.76	26.44	0.009065	29.1705
South Korea	13.01	8.12	10.56	0.000859	122.9905
Laos	0.11	0.08	0.1	0.000136	7.0288
Malaysia	7.51	2.4	4.95	0.272534	0.1818
Myanmar	0.33	0.3	0.31	0.159215	0.0198
Philippines	2.37	1.99	2.18	0.021903	0.9964
Singapore	12.8	1.5	7.15	0.58916	0.1213
Thailand	6.59	3.51	5.05	0.024543	2.058
Vietnam	2.33	1.45	1.89	0.000072	262.4862

*: The trade volume is calculated as the average of total export and import volumes in 2005, 2006, and 2007 taken from DOTS (IMF)
**: GDP measured at PPP is the average of GDP measured at PPP in 2005, 2006, and 2007 taken from the World Development Report, World Bank
***: The Benchmark exchange rate ($-euro/ Currency) is the average of the daily exchange rate in terms of US$-euro in 2000 and 2001
****: AMU shares and weights were reviced in Oct. 2009. This is the 5th version.

Source : RIETI

They use the AMU weights in Table 7 to calculate an exchange rate for the AMU in terms of the US$-euro as follows:

$$US\$/euro/_{AMU}$$
$$= 0.0039\,US\$/euro/_{BN\$} + 5.8666\,US\$/euro/_{CBR} + 2.8395\,US\$/euro/_{CNY} + 477.8761\,US\$/euro/_{IDR}$$
$$+ 29.1705\,US\$/euro/_{JPY} + 122.9905\,US\$/euro/_{KRW} + 7.0288\,US\$/euro/_{LOK} + 0.1818\,US\$/euro/_{MLR}$$
$$+ 0.0198\,US\$/euro/_{MYK} + 0.9964\,US\$/euro/_{PLP} + 0.1213\,US\$/euro/_{SP\$} + 2.0580\,US\$/euro/_{TLB}$$
$$+ 262.4862\,US\$/euro/_{VTD}$$

Calculating Nominal and Real AMU Deviation Indicators

Ogawa and Shimizu (2006) use the nominal exchange rate of each East Asian currency in terms of the AMU to calculate a Nominal AMU Deviation Indicator for each East Asian currency from the

Benchmark Exchange Rate from the viewpoint of deviation from the AMU, which is a weighted average of East Asian currencies determined according to the following formula:

$$\text{Nominal Deviation Indicator (\%)} = \frac{\text{Actual rate of } {}^{AMU}\!/\!_{\text{a currency}} - \text{benchmark exchange rate of } {}^{AMU}\!/\!_{\text{a currency}}}{\text{benchmark exchange rate of } {}^{AMU}\!/\!_{\text{a currency}}} x100$$

Figure 4: AMU Deviation Indicator
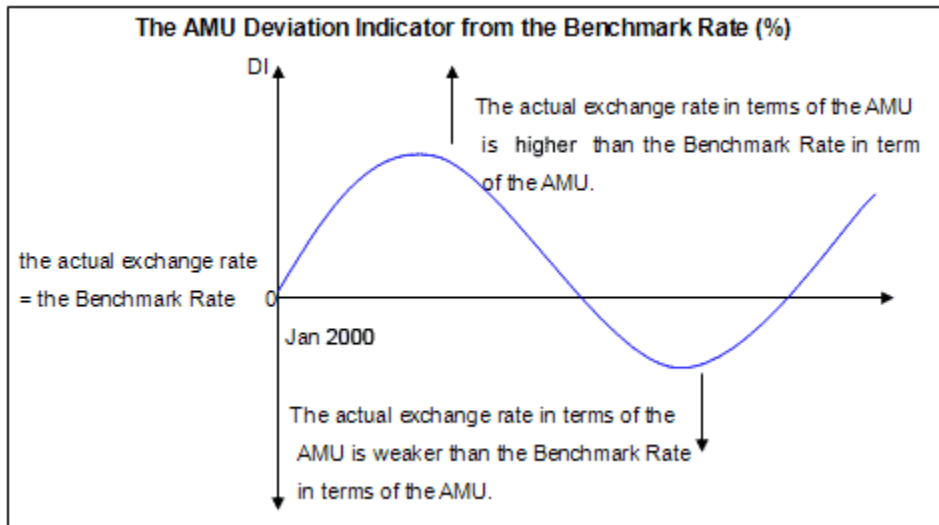
Next, they calculate an AMU Deviation Indicator in real terms by taking into account inflation rate differentials. Given that the Nominal AMU Deviation Indicator is defined as equation (1), they calculate a Real AMU Deviation Indicator according to the following equation:

$$\text{Rate of Change in Real AMU Deviation Indicator}_i$$
$$= \text{Rate of Change in Nominal AMU Deviation Indicator}_i - \left(\dot{P}_{AMU} - \dot{P}_i \right)$$
$$\text{where } \dot{P}_{AMU} \tag{2}$$
$$= \text{inflation rate in the AMU area, and } \dot{P}_i = \text{inflation rate in country } i.$$

They use Consumer Price Index (CPI) data as the price index in calculating the Real AMU Deviation Indicator. Since the CPI data are available only on a monthly basis, they calculate the Real AMU Deviation Indicator monthly. As for the inflation rates in the AMU area, they calculate a weighted average of the CPI for the AMU area using the AMU shares, which is the combination of shares in terms of trade volumes and GDP measured at PPP.

It is mentioned in the paper, that we should monitor the Real AMU Deviation Indicators rather than the Nominal AMU Deviation Indicators in order to consider effects of exchange rates on real economic variables such as trade volumes and real GDP. On the other hand, the Nominal AMU Deviation Indicators are more useful than the Real AMU Deviation Indicators when we consider both frequency and time lags as important for monitoring these measures. Accordingly, they suggest to use the Nominal and Real AMU Deviation Indicators as complementary measures for surveillance of exchange rate policy and related macroeconomic variables and, in turn, for devising coordinated exchange rate policies among the East Asian currencies.

They use the CPI data as a price index because there are data constraints for some of the sampled countries where we have no alternative data but to use the CPI data as a price index.

Revision of the Benchmark Period and the AMU Weights

It was mentioned in RIETI website that the benchmark period is revised annually, after all of the data on trade accounts of ASEAN10+3 countries are updated. Likewise, AMU weights are revised annually, after all of the data on trade volumes and GDP measured at PPP are updated. Current AMU weights are fifth version, which is revised on October 2009.

Ogawa's paper analyzes how much deviation that happens among Asian currencies, which include the Indian rupee, the Australian dollar, and the New Zealand dollar, considering the East Asian Community based on ASEAN+3 (Japan, China, and South Korea)+3 (India, Australia, and New Zealand). That paper investigates whether intra-regional exchange rates increase in instability or deviation when the additional three countries (India, Australia, and New Zealand) join the ASEAN+3. Contribution of each currency to the weighted average of AMU-wide Deviation Indicators shows that movements in the Japanese yen have contributed to those in the weighted average of the AMU-wide Deviation Indicators over time during the sample period from January 2000 to January 2010. Moreover, they use concepts of β and σ convergences in the context of economic growth to statistically analyze convergence or divergence for the ASEAN+3+3 currencies. The addition of the Indian rupee into the ASEAN+3 currencies made the regional currencies unstable before and during the global financial crisis. Moreover, comparison between ASEAN+3+3 and ASEAN+3+Indian currencies shows that the addition of only the Indian rupee was relatively more stable than the addition of the Australian dollar and the New Zealand dollar as well as the Indian rupee since September 2008. It is worthy to consider that India will join the Chiang Mai Initiative to manage currency crises while the monetary authorities will conduct surveillance over stability of the intra-regional exchange rates in the near future.[4]

Challenges and Prospects For an Asian Currency Unit

The use of the ACU as a component of an Asian Monetary System similar to the role that the ECU played within the EMS is an attractive concept in Asia for a variety of reasons. It is seen as a possible way to limit the effects of financial contagion that has resulted from the deepening of economic interdependence within the region. It would provide a mechanism to prevent largely export-oriented Asian countries that compete in international markets from engaging in competitive devaluations. It would help minimize transaction costs arising from the need to hedge against exchange rate volatility.[5]

However, the establishment of an Asian Monetary System similar to the EMS faces a number of challenges. One of these is the difficulty of choosing an optimal exchange rate regime, in view of the divergence in living standards and differences in economic structure, which are much larger in Asia today than in Western Europe during the 1980s and 1990s.[6] Large differences in potential growth and inflation performance and relatively low correlation of business cycles within Asia, as compared to Europe, would make it difficult for Asian economies to manage such a system.

Eichengreen notes two preconditions for successfully defending a system of currency pegs given high capital mobility: close convergence of policies and the maintenance of confidence. Although a system of swap lines and credits under the Chiang Mai Initiative has been recently expanded, it still remains to be seen whether Asian countries are ready to subordinate other policies to the maintenance of the system and to provide extensive financial support in times of crisis.
The establishment of an ACU that would serve as a parallel currency circulating alongside the existing national currencies would avoid the necessity of stabilizing the currencies in the basket.

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[4] Eiji Ogawa, 2010, Regional Monetary Coordination in Asia after the Global Financial Crisis: Comparison in regional monetary stability between ASEAN+3 and ASEAN+3+3

[5] Deok-ryong Yoon, "Is Asian Common Currency Feasible?" The Korea Times (September 22, 2005)

[6] Estimates put the standard deviation of living standards in Asia at about three times that in Europe, see Hew McKay, "An Asian currency – a bridge too far," Asia Times Online (September 29, 2006)

However, there are some serious challenges, as acknowledged by Eichengreen.[7]One is the currency mismatch problems that may arise from banks or firms holding more ACU liabilities than assets and the consequent heightening of credit and liquidity risks. While these could be addressed through prudential supervision and regulation, the quality of regulation and enforcement may not yet be adequate in a number of developing Asian countries to successfully contain these risks to financial stability. Another would be the limitations on the use of the ACU arising from restrictions that would be necessary to prevent currency mismatch problems. Limiting banks' abilities to incur ACU liabilities would restrict the issuance of ACU-denominated bonds as well as the growth of transactions in ACU claims and liquidity in secondary markets, thus making the spread of the parallel currency a slow and lengthy process.

The most important challenge is the difficulty of gaining political acceptability, as the parallel currency would have to be given full legal tender status for domestic transactions, and would be competing not just with the dollar internationally, but also with existing Asian currencies domestically. For this reason, despite its technical merits, it is unlikely that an ACU in this form would be established in the foreseeable future.

The introduction of an ACU serving as an accounting unit without an accompanying Asian Monetary System would be a useful indicator for monetary authorities in formulating and coordinating their exchange rate policies, by allowing them to monitor the collective movement of Asian currencies against the US dollar and the euro, as well as the movement of individual currencies against the regional average As far as financial transactions are concerned, financial liberalization has resulted in East Asia's closer integration with global financial markets, but very little regional financial integration so far. East Asians have maintained a preference for borrowing from and investing in markets outside the region, while US and European financial institutions have come to play dominant roles in key areas of the region's financial markets.[8] In this context, the preference for the US dollars in the Asian region will likely continue to be strong. The attractiveness of an ACU for market participants in the region will also depend on technical factors. It will more likely find acceptance in the region's business sector to the extent that it represents Asia's current economic configuration and financial structure.[9]

Infrastructure and Institution needed to issue ACU Bond

Based on literature study, we summarized four steps to issue ACU Bond. Each step requires certain infrastructure and institution:

Table 8 : Steps to Issue ACU Bond

Step	Infrastructure	Institution
Step 1: Institutional Infrastructure Requirements	Legal status of ACU Usage in financial institution ACU Payment system	ACU Government Financial Institution Financial Institution and Regulators
Step 2: Launch of the ACU by Public Institutions	ACU as unit of account Active and Liquid Bond Market	Multilateral institutions ACU Government
Step 3: ASEAN+3 Member Central Banks	ACU foreign reserves	ACU Central Banks
Step 4: Private Sector	Private sector financial system	Private Sector

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[7] Eichengreen (2006)

[8] East Asian investors are largely oriented toward markets outside the region, particularly the US and European markets, with less than 3% of total East Asian long-term bond investments going to the region in 2003. Were Japanese investors to be excluded, the share of the region in total investments from the nine

[9] Julius Caesar Parreñas, Ph.D, 2006, Challenges And Prospects For an Asian Currency Unit

3.3 Asian Bond Market Initiatives (ABMI)

In Girardin and Steinhar (2008) it was stated that for the success of RMU we need liquid instrument such as bonds to support the use of RMU. Asia already has ASEAN Bond Market Initiative (ABMI). The progress of RMU proposal will also relate with the progress of ABMI. In this literature study we will overview about ABMI.

3.3.1 The problem of ABMI

The 1997-1998 crisis in Asia prompted considerable rethinking of the role of financial markets in the region's economic development. Banks had long been at the centre of Asian financial systems. For a set of late-developing economies with urgent needs for financial intermediation, banking systems were easier to get up and running. Governments could supply the equity capital and in some cases the managerial talent. Close cooperation between banks and governments allowed the authorities to influence the flow of funds - ideally, to ensure that finance flowed towards sectors that were the locus of productivity spillovers and generators of export revenues. Large corporations in need of funding for expensive investment projects that might require a lengthy incubation period could be confident of a stable source of external finance.

Up to the mid-1990s this bank-centered financial system was one of the foundation stones of East Asian economic growth. The crisis that followed then revealed that this form of financial organization also had serious weaknesses. The short maturity of bank loans meant that when confidence was disturbed, as happened in 1997-1998, what had once been a set of patient lenders might not be so patient any more. Seeing their funding decline, banks might call in their loans, subjecting their borrowers to a painful credit crunch. Moreover, with the opening of capital accounts, banks might be in a favored position to access foreign funds, not least because of the perception that their obligations were guaranteed by the public sector. They aggressively extended their intermediation role by borrowing offshore and on lending the proceeds to domestic customers. Generally, the tenor of these foreign credits was even shorter than that of the banks' own loans, exposing them to a maturity mismatch that might cause serious problems if confidence was shaken. Since most foreign funds were denominated in dollars, euros or yen, the banks were exposed to either a dangerous currency risk if they on lent in local currency or an equally serious credit risk if they on lent in those same foreign currencies. Meanwhile, deregulation allowed banks to take on additional risks using techniques with which supervisors found it difficult to keep pace. And in so far as the banks had allowed themselves to be utilized as instrumentalities of the government's industrial policies, they anticipated help from the official sector in the event of difficulties. Thus, the moral hazard inevitably associated with the existence of a financial safety net appears to have been particularly pervasive in the Asian case.

This episode of financial turmoil led to the restructuring of banking systems and to efforts at upgrading their supervision and regulation. But it also created an awareness of the need for better diversified debt markets and specifically for bond markets to supplement the availability of bank finance. Bank and bond finance have different advantages. Bonds and securitized finance generally are thought to have better risk-sharing characteristics. Risks can be more efficiently diversified when they are spread across a large number of individual security holders. This spreading of risks and the existence of liquid secondary markets in standardized securities encourages creditors to make long-term commitments and allows debtors to borrow for extended periods of time.

Banks, in contrast, have a comparative advantage in the information-impacted segment of the economy. They invest in building dedicated monitoring technologies. (This is one way of thinking about what distinguishes banks from other financial market participants.) Consequently they are well placed to identify and lend to small, recently established enterprises about which public information is scarce. In addition, by pooling the deposits of households and firms with non-synchronised demands for liquidity, they are able to provide maturity transformation services for small savers reluctant to lock up their funds for extended periods. As concentrated stakeholders, they contribute to effective corporate governance and are prepared to incur the costs of litigation when legal recourse is required.

The point is not that banks or bond markets are better; there is little systematic evidence of the unconditional superiority of one financial form over the other. Rather, there is a growing body of evidence that countries benefit from well diversified financial systems with a role for both well regulated banks and well functioning securities markets.[10] Banks have a comparative advantage in providing external finance to smaller, younger firms operating in information-impacted segments of the economy, while securities markets, including debt markets, do the job more efficiently for large, well established companies. Similarly, banks and securities markets are subject to different risks. Hence, in financial structure, as in other areas, diversification may help an economy attain a superior position on the frontier of feasible risk-return trade-offs. That is, the existence of a well diversified financial system, with a role for both banks and securities markets, should be conducive both to an efficient allocation of resources compatible with sustainable medium-term economic growth and to financial stability - and specifically to minimization of the risk of late 1990s-style financial crises.

It is in this context that recent efforts to foster the development of Asian bond markets should be understood. These efforts have focused on the development of a more robust and efficient market infrastructure at the national and regional levels. Among the prominent initiatives in this area is the Asian Bond Market Initiative (ABMI) of the ASEAN+3 countries.[11] As endorsed by ASEAN+3 finance ministers at their August 2003 meeting in Manila, the ABMI takes as its goal the development of more robust and efficient primary and secondary markets. To this end ASEAN+3 has established working groups concerned with the creation of standardized debt instruments, the establishment of rating agencies, the provision of technical assistance, foreign exchange transactions and settlement issues, credit guarantee mechanisms, and the role of multilateral development banks, foreign government agencies and Asian multinational corporations in issuing in local markets and local currencies.

3.3.2   Financial Implications of the Asian Bond Market Initiative (ABMI)

The APEC Finance Ministers' meeting from time to time highlights the importance of regional bond market development. APEC ministers have wholeheartedly endorsed the idea of the ABMI and APEC's role in promoting it. ABMI was originally proposed by Japan under the framework of ASEAN plus 3 in 2002 and since then significant progress has been made. The basic thrust of ABMI is to develop efficient and liquid bond markets in Asia in order to meet the needs for indigenous medium and long-term financial resources and enable further economic development in the region. There are several points worth noting about this initiative, which is also receiving ADB technical assistance.

First, in many countries in the region although savings rates are relatively high, quite a large amount of savings remain underutilized. This in turn means that although many Asian countries still suffer from poverty, the cause of poverty is not necessarily a shortage of money. The core issue, therefore, is how to mobilize unused financial resources for various productive investments which contribute to development.

The underlying message of ABMI appears to be Asian countries have relied too heavily on banking channels in the past and now they have come to realize they need to develop more sound, diversified and liquid capital markets. This research fully supports this proposition. They also believe a comprehensive approach on how to mobilize unused resources will become even more critical in the future, taking into account the budget constraints many donor countries now face.

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[10] Demirgüc Kunt and Levine (1996, 2001) in Barry Eichengreen (2006)

[11] The members of ASEAN are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam; the "plus 3" countries are Japan, Korea and China. Another initiative deserving of mention is the APEC Regional Bond Market Initiative agreed to by the APEC Finance Ministers Process (FMP).

Second, this research also realize money flows have become undeniably more crossborder and volatile, which while worrying should contribute to the better usage of finance within the region, as savings from one country might quickly end up being transferred to more attractive investment opportunities in others. But many Asian developing countries have not fully deregulated their capital account transactions and governance or market infrastructure is still weak. Enhancing market infrastructure properly is one of the key priorities of ABMI.[12]

3.3.3 Role of Regional Credit Agencies in Development

One of the proposals identified in the ASEAN +3 Asian Bond Market Initiative (ABMI) which was endorsed at the ASEAN +3 Finance Ministers Meeting in Manila on August 7, 2003 is a need for strengthening the credit rating systems in Asia by developing and utilizing existing Asian domestic credit rating agencies (DCRAs) who are acquainted with the economic and social situations of Asia. And hence, they are able to issue fair and credible ratings, which will be accepted by international investors, for cross border international issuance by Asian borrowers. A fair and reliable credit rating system in the region would be important in laying the foundations essential for active regional bond markets in Asia.

The general consensus and findings was that there was a need to enhance credit rating systems in Asia, primarily in areas of raising the standards and process and increasing the level of transparency among others.

1. Performance of Asian DCRAs

Rating agencies play an important role in bridging the information gap between issuers and investors, providing a common yardstick for measuring credit risks and performing a key surveillance on monitoring function for investors. In emerging markets, they typically take on an additional role in promoting the development of bond markets through education, information dissemination and research activities. Presently, there are about 30 DCRAs operating in Asia including 6 in China.

Performance of Asian DCRAs is assessed in the report of Asian Bankers Association (ABA) "Development of Regional Standards for Asian Credit Rating Agencies : Issues, Challenges and Strategic Options". It presents the results of a survey conducted to both international and domestic investors asking their views of Asian CRAs' performance. The key issues are as follows:[13]

(1) Timeliness in rating actions

DCRAs have a better understanding and insights of local companies and have better access to local information. However, it does not mean that DCRAs are capitalizing on this advantage. They suffer poorly in being timely with their rating actions. There is much more room for forward looking analysis that is ahead of the market sentiment.

(2) Accuracy of DCRAs' rating and quality of rating reports and analysis

An important criticism that has risen is that often, insufficient information is disclosed and that reports are more descriptive than analytical. It is not surprising that DCRA rationales are purchased primarily as information sources and used as a counter check to see if any important points are missed by the investors' own in-house research.

(3) Credibility

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[12] Kanamori, Toshiki. 2003. Emerging Issues for Regional Cooperation in Asia-Pacific, ADBI Research Policy Brief No. 14 Regional Cooperation, p. 4-5.

[13] Imai, Kazuo. 2004. "ACRAA and Harmonization under Asian Bond Market Initiative", The Occasion of 6th Tokyo Roundtable on Capital Market Reform in Asia, September 28th 2004, p.3-4.

The key opinion of many international investors is that DCRAs are not credible. The absence of credibility means that DCRAs are in a very weak position relative to the more credible international credit rating agencies (ICRAs). According to international investors, the credibility of DCRAs can be significantly enhanced by improving four areas namely independence, transparency, accuracy of ratings, and quality of analysis.

2. Formation of Association of Credit Rating Agencies in Asia

In order to address those issues of Asian DCRAs' performance and to promote adoption of common standards that ensure high quality and comparability of credit ratings throughout the region and eventually to contribute to the development of Asia's bond markets, the Association of Credit Rating Agencies in Asia (ACRAA) was organized on September 14, 2001, when the Articles of Association were adopted in an organizational meeting at ADB headquarters.

To date, ACRAA counts 19 credit rating agencies as members coming from the following countries as shown in the handout: Bangladesh (1); People's Republic of China (2); India (3); Indonesia (2); Japan (1); Korea (3); Malaysia (2); Pakistan (2); Philippines (1); Taiwan (1); and Thailand (1).

3. Harmonizing Credit Rating Standards and Practices

Harmonization can be briefly defined as the "convergence of various practices and rating principles across borders". Harmonization, as an Asian-wide collective effort, is a continuous dynamic process that summons us to seek to know and understand what different credit rating agencies do, how they do things, and why.

The end-goal of any harmonization process for credit rating agencies is to achieve a degree of comparability across rating agencies in terms of rating
methodology, rating criteria, definitions, benchmarks and overall rating process. This comparability is promoted by uniformity and consistency in rating policies, in disclosures, in communications and in a wide range of business practices.

Asian CRAs must cooperate with and talk to each other to bring about harmonization. However, harmonization is not an easy process. Even as we move towards a certain "commonality", differences are highlighted – such as the depth and sophistication of the capital markets in different countries. Let its be more specific by citing some obstacles to harmonization.[14]
1) Different sense of urgency on the part of DCRAs. A desire to be independent, autonomous.
2) Different accounting standards being followed.
3) Different legal frameworks prescribing legal requirements.
4) Different levels of development of domestic capital markets.
5) Varying business cultures which prescribe expectations on disclosure and norms of behavior.
6) Different attitudes of Regulatory Authorities.

3.3.4. European and Singapore Bond Market Benchmarking

European Commission Directorate General Economic and Financial Affairs (2000) note that there are € 329 billion in the second quarter; compared to almost € 370 billion in the previous quarter and a quarterly average of € 350 billion in 1999. As of 2009, it is estimated that the size of the worldwide bond market (total debt outstanding) is an estimated $82.2 trillion[15].

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[14] Imai, Kazuo. 2004. "ACRAA and Harmonization under Asian Bond Market Initiative", The Occasion of 6th Tokyo Roundtable on Capital Market Reform in Asia, September 28th 2004, p.6-7.

[15] http://finance.mapsofworld.com/bond-market/european.html, viewed 19 August 2010.

According to the AFME (2000), bonds issued in the US only possess less than half –about 44%--of the global bond market volume. Europe has 2/3 of the total amount of securities outstanding in bonds and shares; The bond market is about the same size as the stock market in the US.

AFME (2000) also note that about 60% of the European bond market is government bond debt, 29% is corporate, and 11% is asset-backed; in the US, the proportion of bonds issued by the corporate sector is much larger. The majority of bond market participants in Europe are institutional investors, such as pension funds, insurance companies and banks.

In Italy, individual investor holdings of bonds comprise 20% or more (in 2004, average more than €12,000) of total financial holdings. In Germany, the equivalent percentage is between 10-15% (in 2004, some €5,800) and in other countries it will be typically lower than 5%; the lowest figure being that for the UK (just 1.5%). (In 2004, average British, Spanish and French individual investors held around €1,000 worth of bonds.) In Belgium, Germany and Italy, individual investors prefer to invest in bonds directly while in other European countries such investments take place primarily through funds (AFME, 2000).

CEPR (2006) points out some characteristics in Europe Bond Market:

- It is difficult and costly to short sell bonds in Europe.
- The European corporate bond market is an over-the-counter market, revolving around dealers and brokers.
- European bond market is decentralized. This market is self-regulated by the International Capital Market Association (ICMA).

The size of the Singapore corporate debt market declined marginally from S$171 billion in 2007 to S$168 billion in 2008. In tandem with the global economic downturn and widespread decline in bond markets, total debt issuance in Singapore dropped sharply by 63% to S$56 billion in 2008 – the lowest issuance volume recorded since 2002. Unfavorable market conditions in the last quarter of 2008 affected both Singapore dollar denominated (SGD) and non-SGD debt issuances, leading to a year-on-year drop of 48% and 67% respectively. 64% of SGD debt issued in 2008 were in maturities of 1- to 5-year, while long term bonds with tenor of more than 10-year maintained at 20% of total SGD debt issuances, as shown in Chart 2. Majority of non-SGD debt was in maturities of less than 1 year. The proportion of SGD and non-SGD structured debt maintained at 41% and 13% respectively, compared to 42% and 14% in 2007. Despite the general decline in bond issuances, credit linked notes issuances registered a 27% growth to S$923 million last year, accounting for 15% of SGD structured debt issued.

3.3.5. Indonesia Bond Market Overview

Asian Development Bank (ADB, 2010) notes that Indonesia's bond market has grown steadily in recent years to offer a more diversified array of debt instruments to cater to a broader investor base. Foreign investors are allowed to invest in the bond market, subject to regulatory approval. The country's current legal framework for securitization encourages opportunities for new instruments to be introduced. As the largest issuer of bonds, the Government of Indonesia regularly taps the local market to finance the state budget.

Corporate bond activities, including conventional and Islamic bond offerings, accelerated significantly beginning in 2003 and have maintained momentum since then. Islamic bonds, which are based on shari'a principles, play a major role in Indonesian capital markets. In April 2008, the Islamic Shari'a Debt Bill was passed into law to enable the Government to issue Islamic bonds.

The status and expected growth of Indonesian capital markets, and strategies for future development, are detailed in the Indonesian Capital Market Master Plan, which is linked below.

Baharudin (2005) points out several important stages of recent Indonesian Bond Market regulation history:
- Government Securities Law No. 24 of 2002
- Decrees of Ministry of Finance of the Republic of Indonesia
- Bond Taxation
- Establishment of Indonesian Dealer Market Association (IDMA)
- Publication of Market Information by SSX
- Indonesian Master Repo Agreement (MRA)
- Bapepam (Indonesia Capital Market Supervisory Agency) has approved the rules for the Organized Secondary Corporate Bond Market at the Surabaya Stock Exchange
- The rules for the Organized Secondary government Bond Market is on a very intensive discussion

Baharudin (2005) also notes the trend of Indonesia Bond Market:
- An Upward Trend of Volume and Frequency of Trades
- A Downward Shifting of Yield Curve
- A More Diverse Investor Base
- A Lengthened Average Debt Portfolio Duration
- Oversubscription in Auction
- Clearance and Settlement System Have Been Enhanced

Further, Baharudin (2005) depicted the ownership composition of Indonesia Corporate Bond Market as of April 2005 as follows:[16]

Figure 3 : Ownership Composition of Indonesia Corporate Bond Marke, April 2005
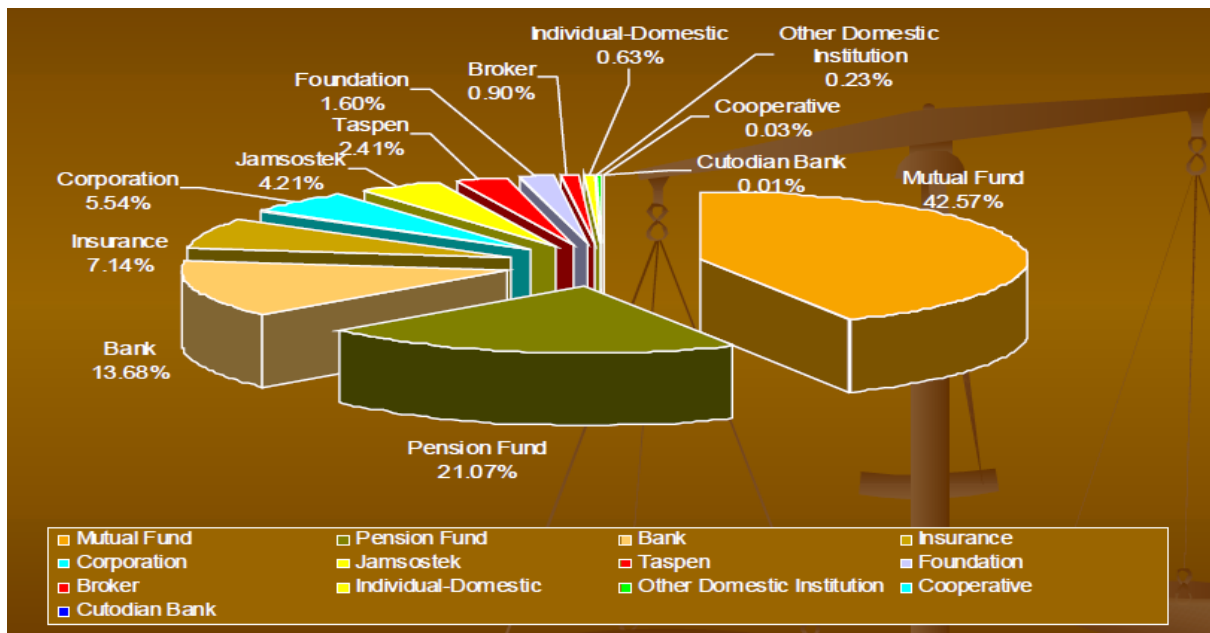
Specifically, in case of Indonesia Government Bond Market, the Government Bonds (called "Surat Utang Negara") have distinct objective as follows:[17]

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[16] Baharudin, A. 2005. "The Indonesian Bond Market Updates". Capital Market Supervisory Agency (BAPEPAM). Jakarta Indonesia. Page 7.
[17] Universitas Indonesia – Indonesian Ministry of Finance. 2009. "Measuring Government Debt Performance". Page 5.

Figure 4 : Debt Management Framework in Indonesia
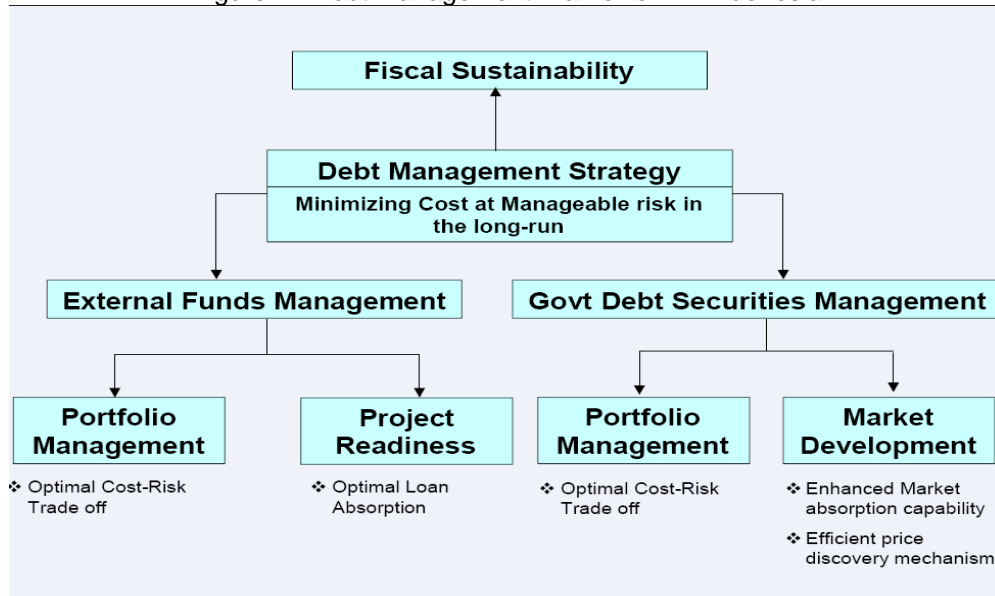
DG Debt (2009) also note that there are three major categories of Indonesian Government Debt as of 2008:
- Fixed Rate (FR), about 74% of total government debt.
- Variable Rate (VR), about 23% of total government debt.
- Zero Coupon (ZC), about 3% of total government debt.

Further, our recent data as of 2009, we note that:
- Total Indonesian Bond Market is Rp 149,815,900,000,000.00 (April 2009).
- Outstanding Indonesian Government Debt is Rp 971,312,424,463,886.00 (September 2009).
- Outstanding Tradable Indonesian Government Debt is Rp 557,110,896,000,000.00 (September 2009)

Therefore, according to Baharudin (2005), Indonesia Bond Market has several challenges as follows:
- Need More Enhancement on Liquidity and Transparency
- Need Further Enhancement on Clearance and Settlement System
- Need Further Regulation
- Need Further Development on Repo Market
- Good Corporate Governance Enforcement

Specifically, according to literature study, we conclude that the challenges of ACU implementation in Indonesia Bond Market are as follows:
- Indonesia Bond Market is quite new, so Indonesia should develop the Bond Market itself first before commencing ACU Bond Market.
- Indonesia Central Bank should also integrate ACU as single regional currency if ACU Bond Market is implemented later.
- Indonesia requires good coordination among Central Bank, Capital Market and Bond Market regulators if Indonesia wants to implement ACU Bond Market successfully.
- Indonesia should promote its Bond Market intensively; otherwise, the Indonesia Bond Market will be less developed like now.

IV. SECONDARY DATA ANALYSIS

To explore the benefits of AMU for Indonesia, we need to explore the development of AMU itself., specifically for Indonesia. The following AMU-CMI graph are calculated by Ito, Ogawa, and Shimizu (2010), published in RIETI website.

Graph 3 : AMU-CMI Nominal 14 Currency
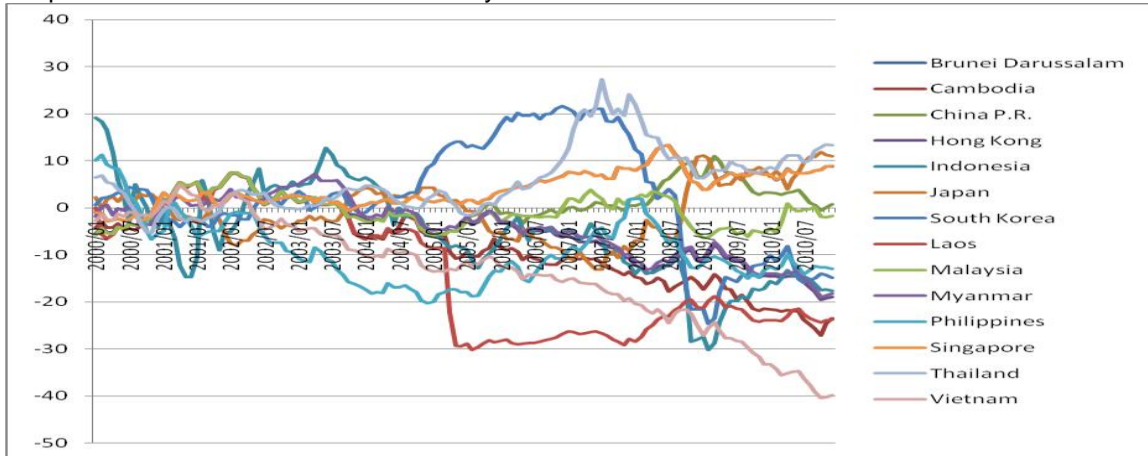
Source : RIETI

Graph 4 : Indonesia AMU-CMI Deviation Indicator, in Nominal and Real Terms, 2000-2010
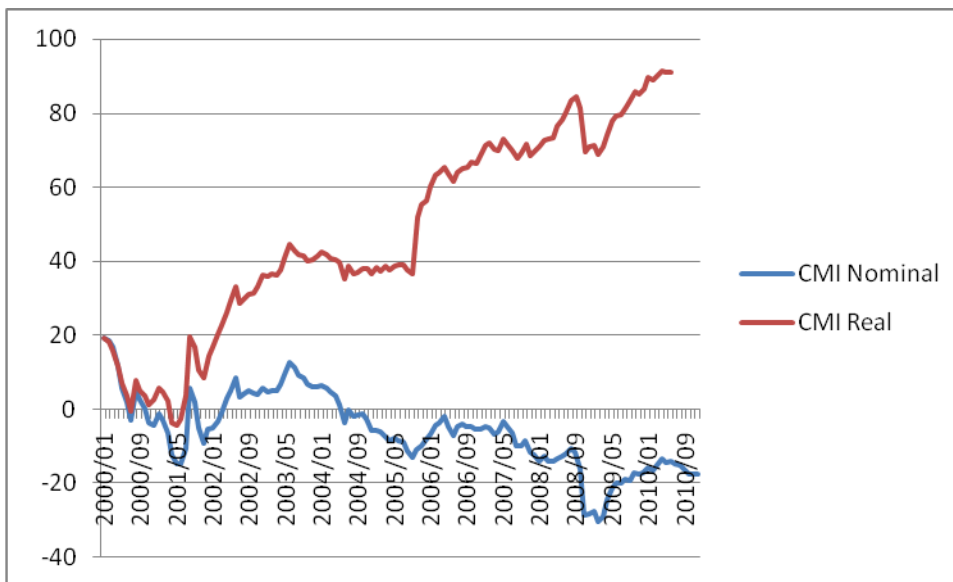
Source : RIETI

According to Graph 4, it is clear that Indonesian rupiah tend to diverge from AMU. The divergence was more sharp since 2005. In year 2005, Indonesia experiencing structural break in inflation, according to the sharp rise of gasoline price. This inflation caused rupiah depreciation to US$. Because other Asian countries not experienced depreciation like Indonesia, Indonesian rupiah depreciate relatively to other Asian countries exchange rate. It was reflected by Graph 5, which showed the sharp depreciation of nominal rate of Indonesia to AMU in 2005. In period

2008-2009, Indonesia/AMU exchange rate tend to appreciate, but in period 2010, Indonesia/AMU exchange rate was relatively stable.

Graph 5 : Nominal rate of Indonesia/AMU, 2005-2010
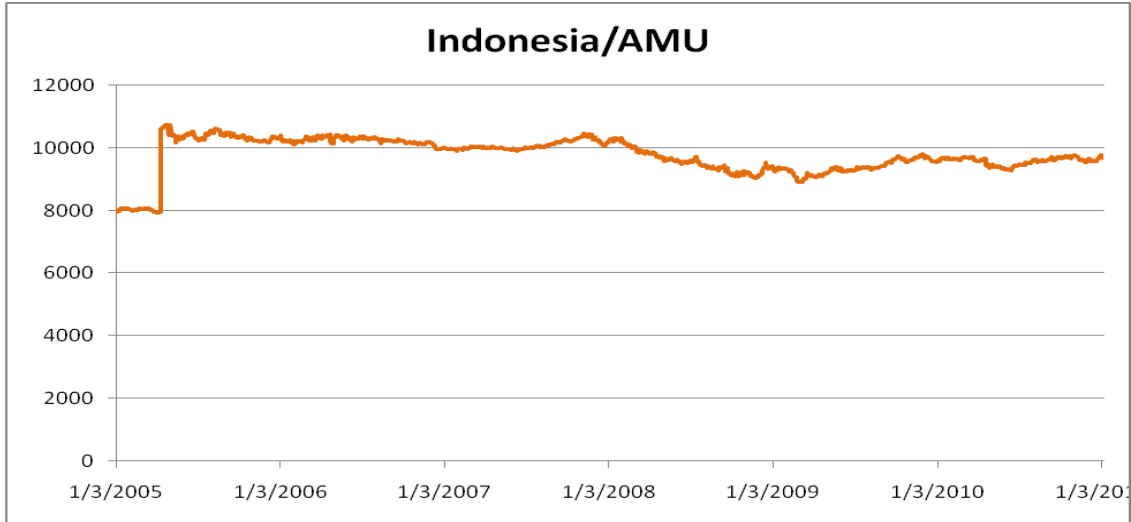
Source : RIETI

Graph 6 : Nominal rate of Indonesian rupiah/AMU and Indonesian rupiah/USD, 2005-2010
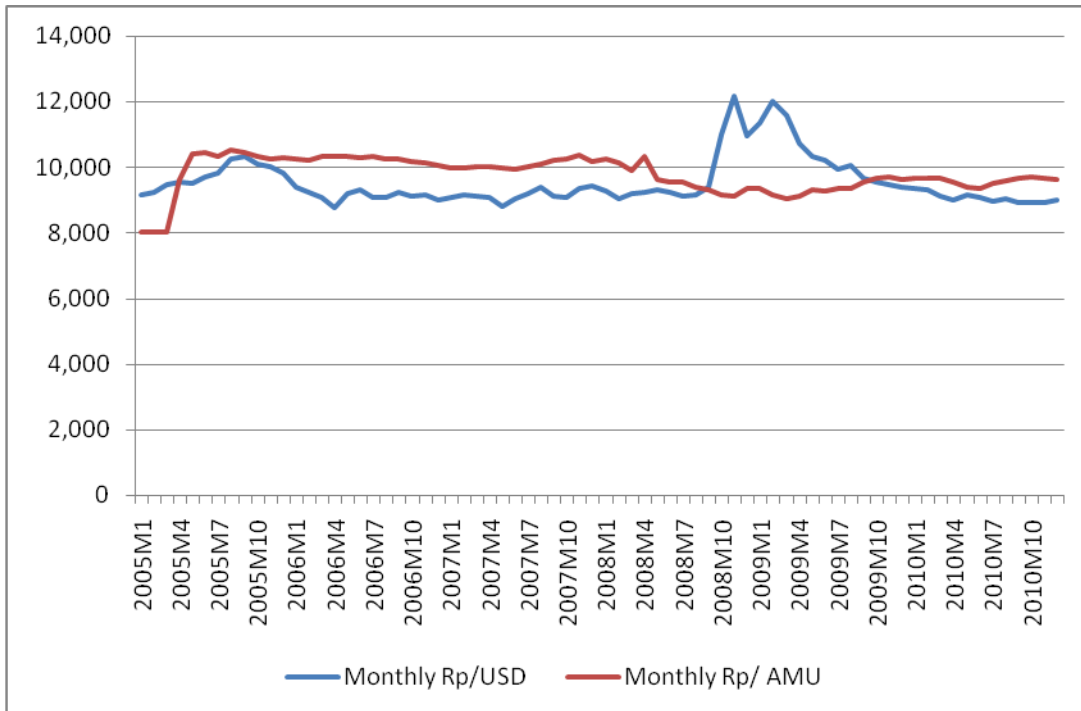
Source : RIETI and CEIC

According to Graph 6, rupiah to AMU tends to be higher than rupiah to USD since 2005. But the trend reversed after October 2008, which rupiah depreciated significantly to USD. The trend changed in October 2009, that rupiah/USD appreciated according to massive capital inflows to Indonesia, which mean rupiah/AMU was higher than rupiah/USD.

Graph 7 : Volatility Indonesian rupiah/AMU compared to Volatility Indonesian rupiah/USD, 2005-2010
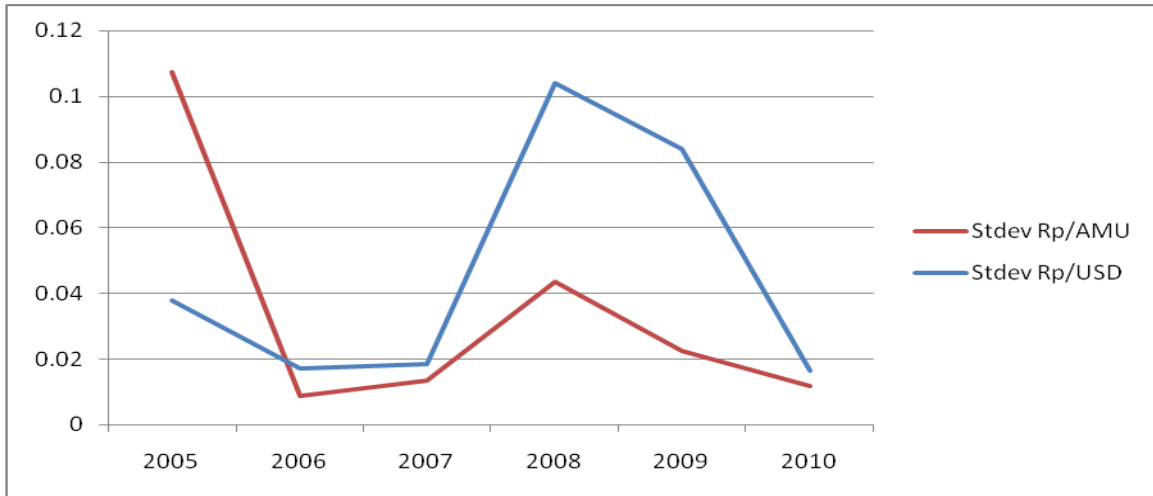
Source : Calculated; with the source of data from RIETI and CEIC

According to Graph 7, since 2006, the volatility of Rupiah/AMU was smaller than volatility of Rupiah/USD. It can be the starting point for Indonesia to consider RMU in its exchange rate policy.

V. IN DEPTH-INTERVIEW RESULTS

1. Description of Group Of Respondents

Respondents of the research consists of six different groups (Bank Indonesia, Ministry of Finance, capital market player, banking sector, economists and expert, and private sector). In total of 18 respondents, two respondents from Bank Indonesia (11.1 percents), three respondents from Ministry of Finance (16.7 percents), three respondents from capital market player (16.7 percents), two respondents from banking sector (11.1 percents), six respondents from economist and expert (33.3 percents), and two respondents from private sector (11.1 percents).
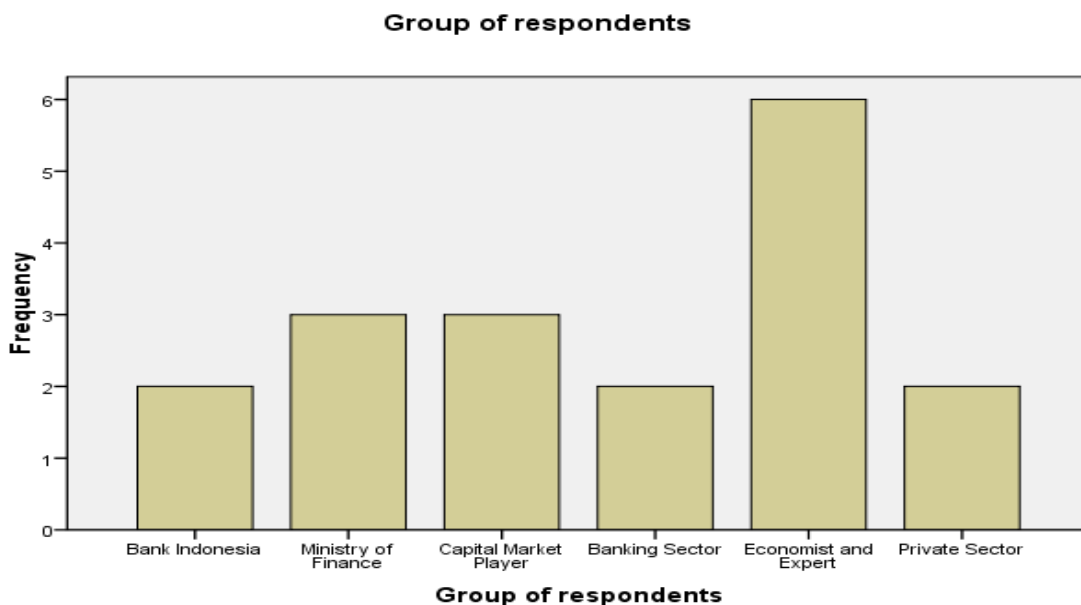
2.Opinion about implementation of official use of RMU

From opinion about the implementation of official use of RMU, we found three different answers about this. Nine respondents out of 16 (56.25 percents) stated it's hard to use RMU in official term, six respondents (37.5 percents) stated it's very hard to use RMU in official term. The rest, one respondent (6.25 percents) stated it's easy to use RMU in official term.

In general, based on the findings, we can conclude that it's hard to use RMU for implementation in official use. Based on interview, there were several reasons why it's hard to implement. *First*, there are many differences in economic condition between ASEAN countries. *Second*, disparity in budget management, fiscal policy, and government accounting standard of ASEAN countries. *Third,* the infrastructures and government system of ASEAN countries are not ready to support RMU. *Fourth*, basic political problem of nation when the representatives bring the nationalism issue in deciding whether to be more integrated with other member countries.

Opinion about official use
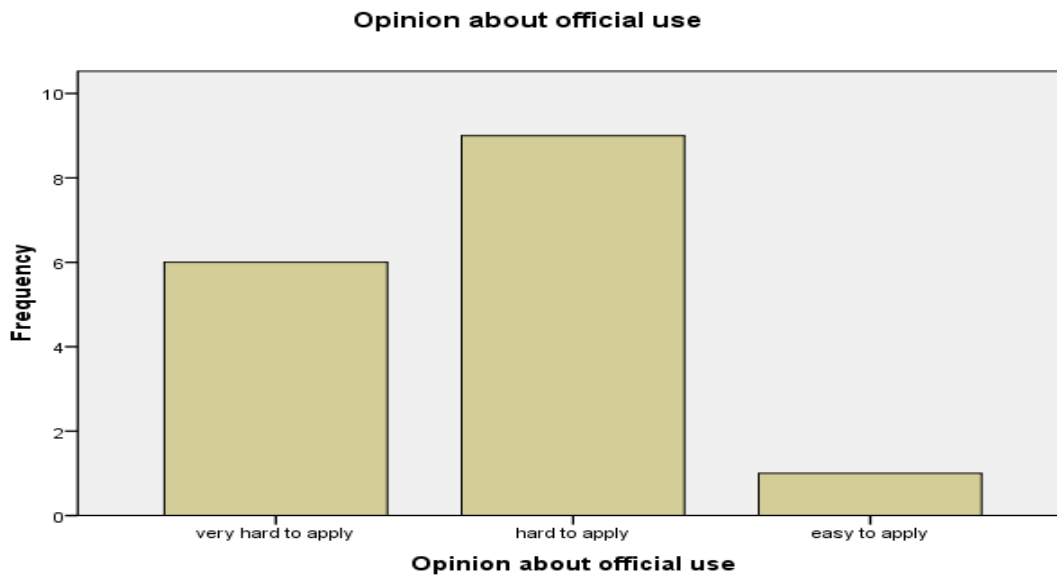
3.Opinion about implementation of private use of RMU

Based on the opinion about the implementation of private use of RMU, eight respondents out of 17 (47.06 percents) stated it's very hard to use RMU in private term, seven respondents (41.18 percents) stated it's hard to use RMU in private term. The rest, two respondent (11.76 percents) stated it's easy to use RMU in private term.

Private sector such as capital market, banking sector, exporters and importers deals with the same problem as government does. However, the problem faced by the private sector occurs simultaneously because of the problem in governmental sector. When there is a problem in the system built by the government, it will affect the private sectors. In general, the respondents think that it is hard to use RMU implementation for private sector if the governmental sectors are fail in enabling it. The reason is same as in governmental sectors, bad infrastructures and governmental system give no incentives for private sectors to support the implementation of RMU.

Opinion about private use
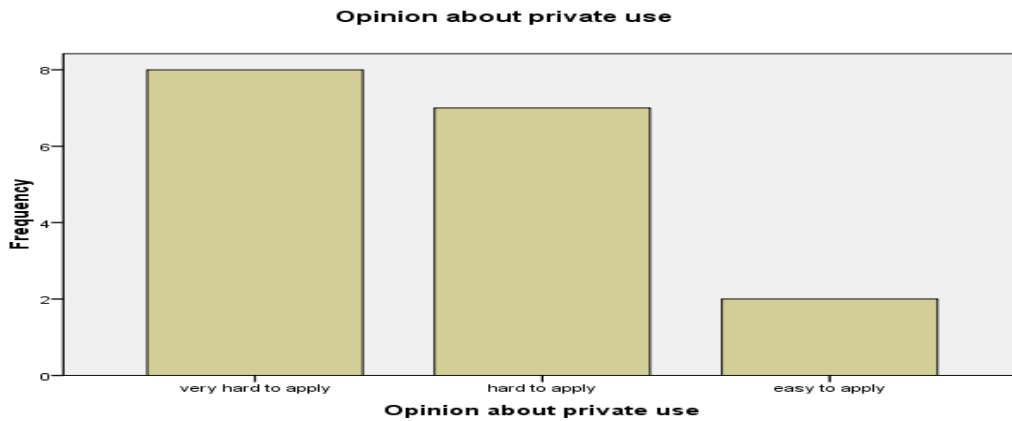
4.The most suitable use of RMU in official transaction

There are three possible use of RMU in official transaction. First, divergence indicator or surveillance mechanism. Second, settlement between central bank. Third, central bank intervention.

Based on the interview about the suitable use for official transaction, 10 respondents out of 18 (55.56 percents) chose divergence indicator or surveillance mechanism as the most suitable use, five respondents (27.78 percents) chose settlement between central bank, and three respondents (16.66 percents) chose other option.

Based on the interview, majority of respondents vote for divergence indicator/ surveillance mechanism. The respondents think that RMU is advantageous because it helps ASEAN to monitor countries monetary base indicator for determining the manageable range of appreciation/depreciation in its currency by comparing to others'. The use of this divergence indicator is more likely to use because there is no transaction involved, ASEAN countries only need to see the data and does not need any adjustment in the system. Otherwise, the settlement between central bank and central bank intervention need many adjustments such as new agreement in monetary system and more developed payment system and transaction mechanism

The most suitable use for official
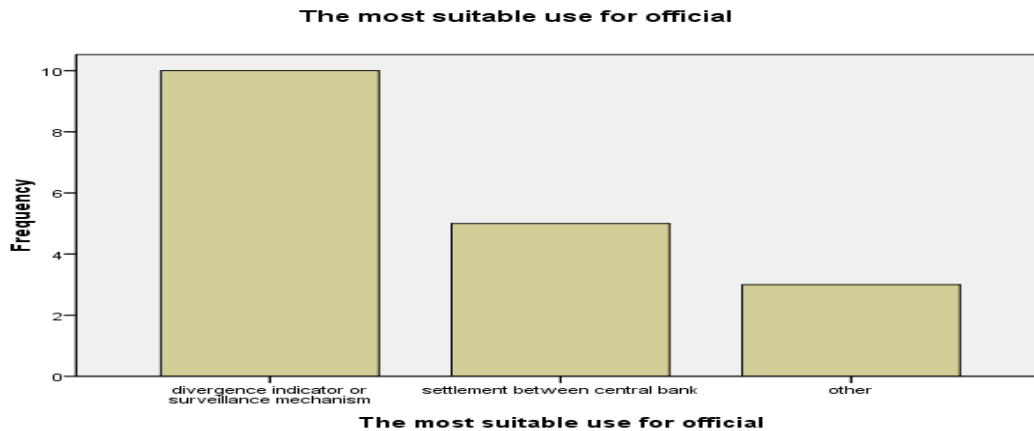
5.The most suitable use of RMU in private transaction

For private transaction, there are four possible uses of RMU. First, indicator relative competitiveness for exporter or importer. Second, denomination in transaction. Third, denomination in private capital market or bonds market. Forth, denomination in banking activities.

Based on the interview about the suitable use for private transaction, nine respondents out of 18 (50 percents) chose indicator relative competitiveness for exporter or importer as the

most suitable use, four respondents (22.22 percents) chose denomination in transaction. The rest, three respondents (16.66 percents) chose denomination in banking activities and two respondents (11.11 percents) answerd other option.

The use of indicator of relative competitiveness is more likely to the respondents because it is easier than any other choices. The denomination in transaction, private capital/bonds market, and banking activities need a big transformation in payment system and transaction mechanism.

The most suitable use for private
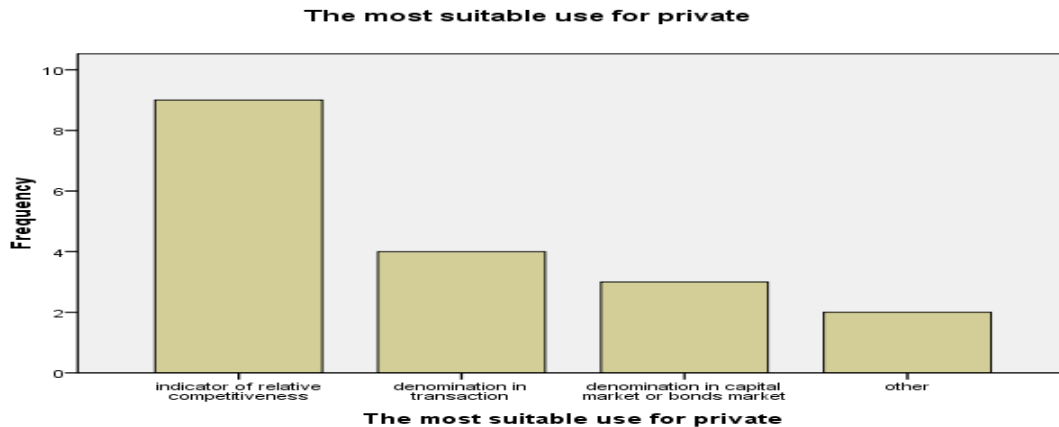
6.Treatment of RMU

Based on the interview about the treatment of RMU, 10 respondents out of 17 (58.82 percents) chose RMU would be treated as a foreign currency, six respondents (35.29 percents) chose RMU would be treated with special treatment. The rest, one respondent (5.88 percents) chose RMU would be treated as a national currency.

The respondents think that the treatment of RMU as foreign currency is more likely because it needs time to make an adjustment for a special treatment and to make it as national currency.

Treatment of RMU
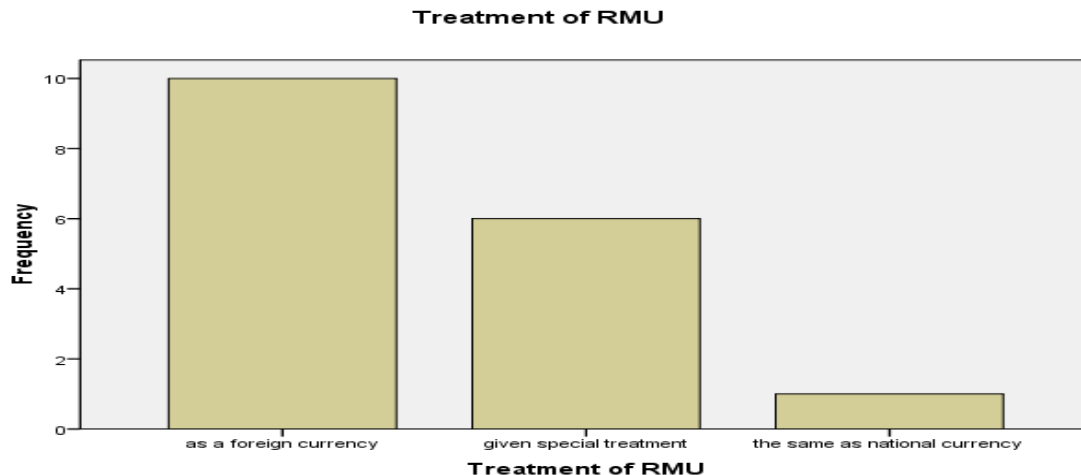
7.RMU weight
<u>First rank</u>

Based on the interview about the first rank weight for RMU, five respondents out of 18 (27.78 percents) chose GDP as first rank weight for RMU, five respondents (27.78 percents)

chose GDP per capita at PPP as first rank weight for RMU, five respondents (27.78 percents) chose other option, two respondents (11.11 percents) chose intra ASEAN trade, one respondent (5.56 percents) chose CMIM weight chose RMU would be treated as a national currency. In determining RMU weight, the respondents find it difficult to choose between GDP, Per Capita GDP at PPP, and other option. The choice shows that three of the weight has the same contribution to determine the weight of RMU.

Second rank

Based on the interview about the second rank weight for RMU, six respondents out of 13 (46.15 percents) chose intra ASEAN trade, three respondents (23.08 percents) chose other option, two respondents (15.38 percents) chose GDP per capita and two respondents (15.38 percents) chose CMIM weight.

The respondents think that Intra ASEAN trade is more able to represent economic activities among ASEAN countries. Intra ASEAN trade are relatively fair in determining currency weight of RMU because the more a member country trades with another member, the more the country gives contribution in the region.

First rank weight for RMU

First rank weight for RMU

Second rank weight for RMU
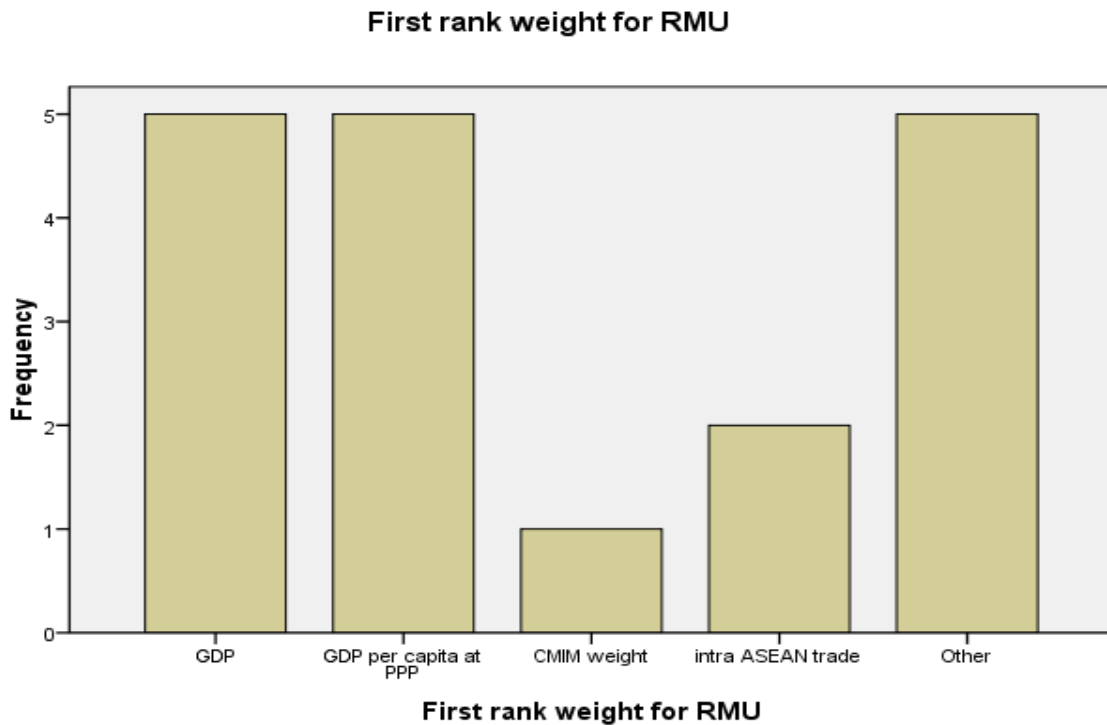
Second rank weight for RMU
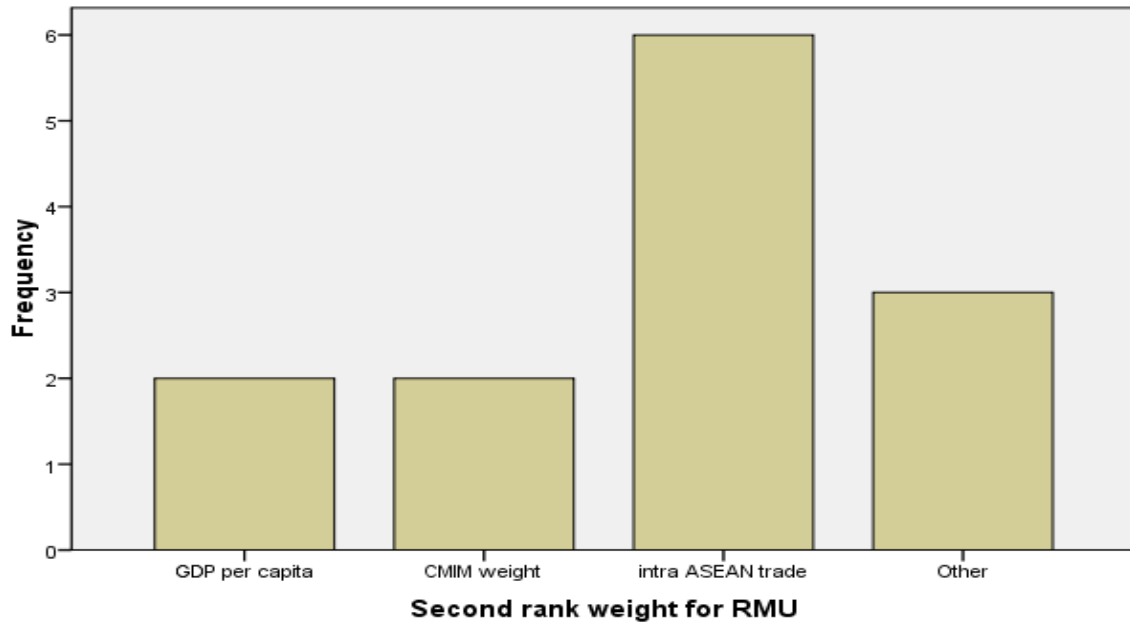
8.Base Year of RMU

Based on the interview about the base year of RMU, seven respondents out of 17 (41.18 percents) chose year 2009 as the base year for RMU, three respondents (17.65 percents) chose other option as the best year for RMU, two respondents (11.76 percents) chose year 2000, two respondents (11.76 percents) chose year 2007, one respondent (5.88 percents) chose year 2004, one respondent (5.88 percents) chose year 2006, one respondent (5.88 percents) chose year 2010.

The majority of respondents chose 2009 as the base year because they think that there is a structural change in world trade which is China have greater role in export of manufacturer product. Another respondent also argue that 2009 is the end of global financial crisis, so we can have a fresh start in gathering currency data that is free from the disturbance effect of economic crisis.

Base year of RMU
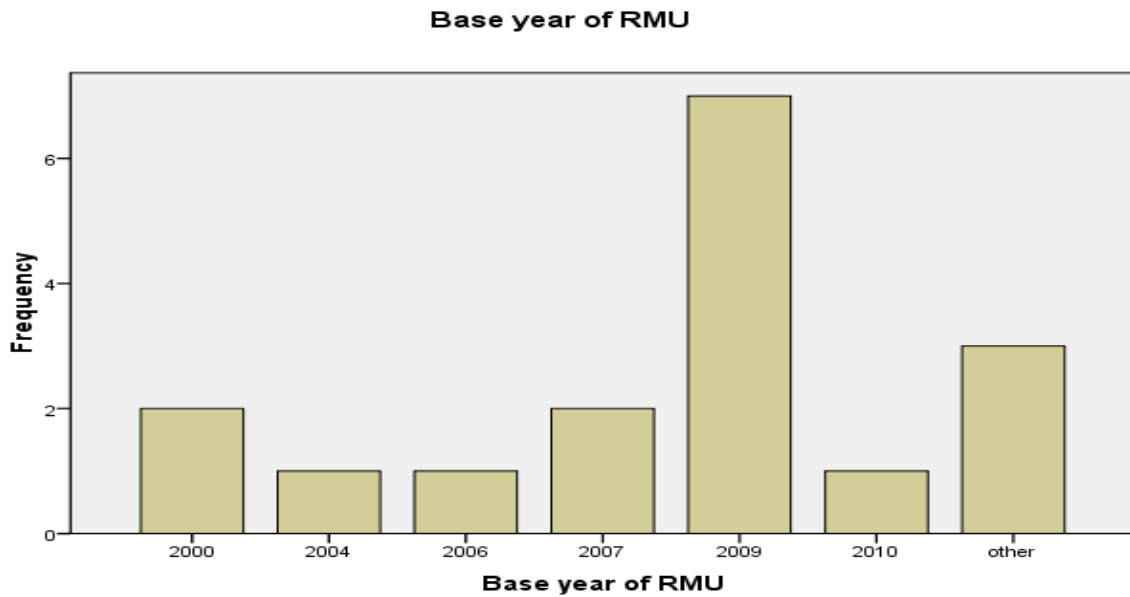
9. Group of Countries

Based on the interview about the group of country involved in RMU, seven respondents out of 17 (41.18 percents) chose ASEAN plus three, five respondents (29.41 percents) chose ASEAN countries, four respondents (23.53 percents) chose other option and one respondent (5.88 percents) chose ASEAN plus two (Japan and Korea).

According the result, majority of the respondents prefer the scheme that ASEAN nations cooperate with big East Asia Nations such as Japan, Korea, and China. The majority opinion support that RMU need anchor country and the only possible candidate to become anchor countries are either China or Japan.

Groups of countries
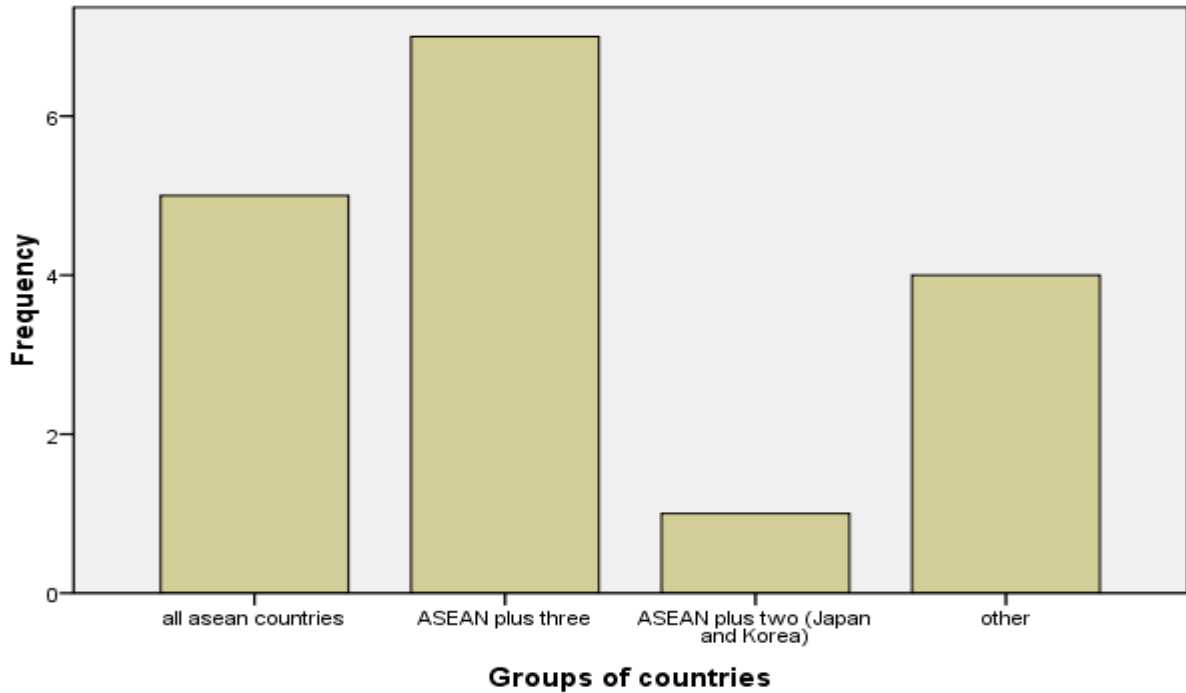
10.The Leader of RMU

      Based on the interview about the leader in countries group, five respondents out of 15 (33.33 percents) chose other option as the leader of the group, four respondents (26.67 percents) chose Japan as the leader of the group, three respondents (20 percents) chose China, two respondents (13.33 percents) chose Singapore, and one respondent (6.67 percents) chose Korea. One important explanation is the respondents argue that it is a sensitive issue so many respondents tend to be neutral and choose "other" option.

Leader for RMU
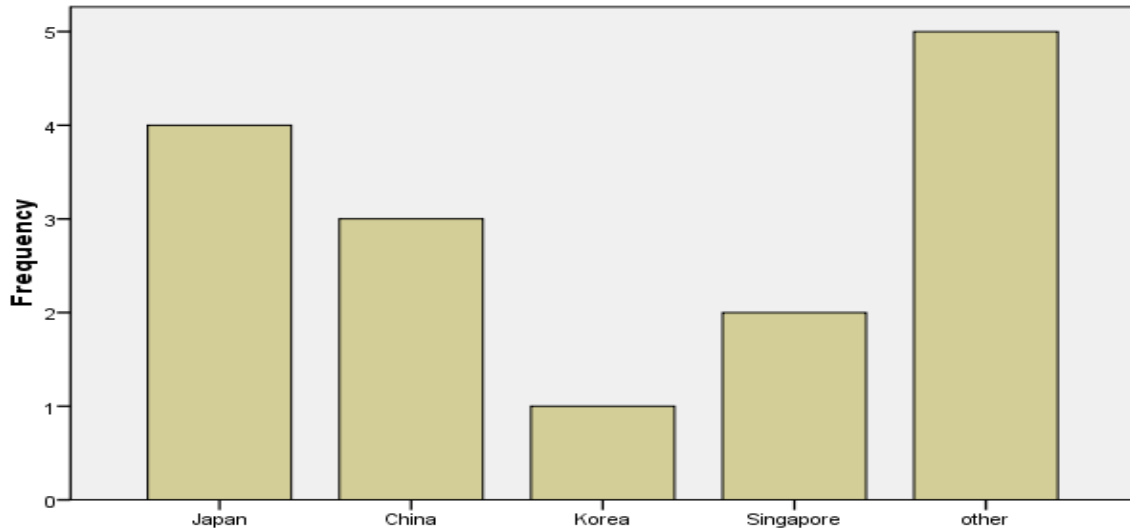
Leader for RMU

11.Weight revision of RMU

Based on the interview about the revision on RMU's weight, five respondents out of 18 (27.78 percents) chose every once a year regularly, four respondents (22.22 percents) chose significant change on economic variables of members, three respondents (16.67 percents) chose every five years regularly, three respondents (16.67 percents) chose other option, two respondents (11.11 percents) chose if the weight of any currencies has changed by 25 percents or more, and one respondent (5.56 percents) chose when there is new country joining the RMU.

Weight revision
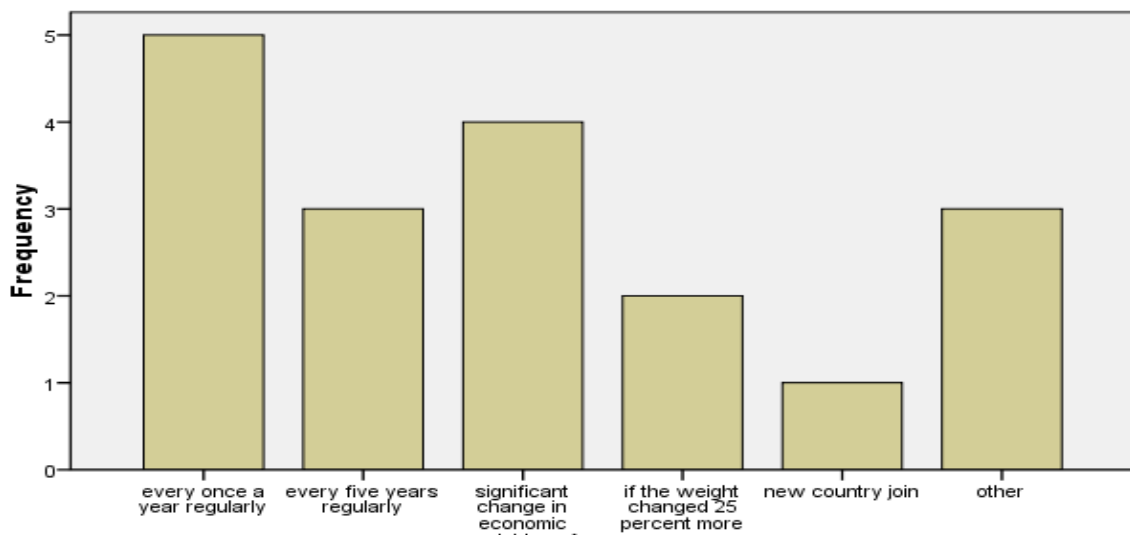
Weight revision

12.Opinion about ACU compared to ECU

       Based on the interview about the comparison between ACU and ECU, 11 respondents out of 17 (64.71 percents) chose ACU would be less succeed than ECU. The rest, three respondents (17.65 percents) chose ACU would be as successful as ECU and three respondents would be more succeed than ECU.

       The majority of respondents think ASEAN is tend to be more concern about political cooperation rather than economic one due to the minimum contribution of the economic cooperation. Another opinion tells that there is a big disparity in terms of economic size, macroeconomics indicators, political view, etc. There are more less-developed countries in ASEAN, than those in EU, which can be said to be less ready to face a Currency Union. In brief, the respondents think that a Currency Union gives no benefit for ASEAN countries.


Opinion about ACU compared to ECU
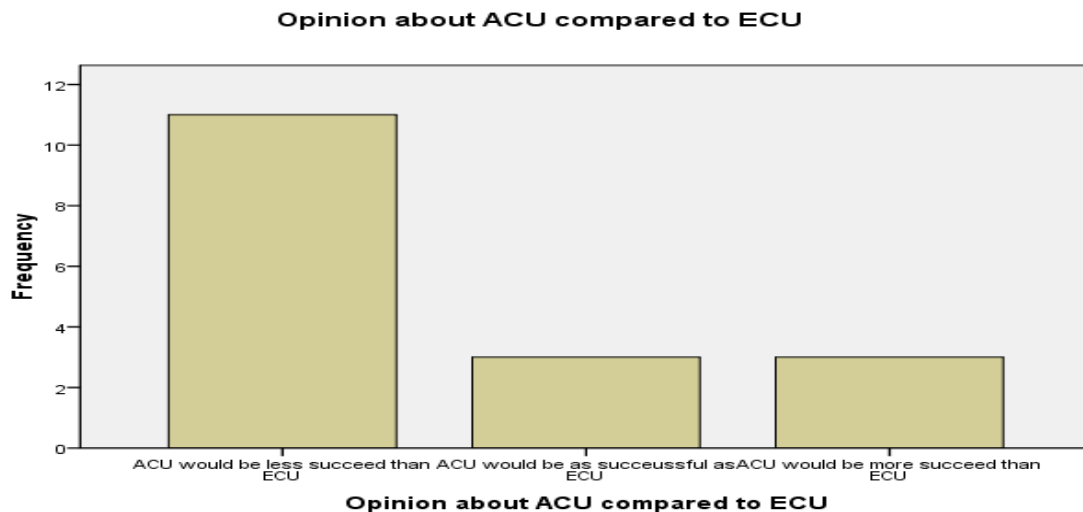
13.Opinion about cost vs benefit of RMU

       Based on the interview about the comparison cost and benefit if we implement the RMU, nine respondents out of 15 (60 percents) chose cost would outweigh benefit, three respondents (20 percents) chose cost would be equal with benefit, and three respondents (20 percents) chose benefit would outweigh cost.

       We can conclude from the previous points, implementation of RMU will give more cost rather than benefit such as the setting up of new governmental and financial system and infrastructures.

Opinion about cost vs benefit of RMU

Opinion about cost vs benefit of RMU
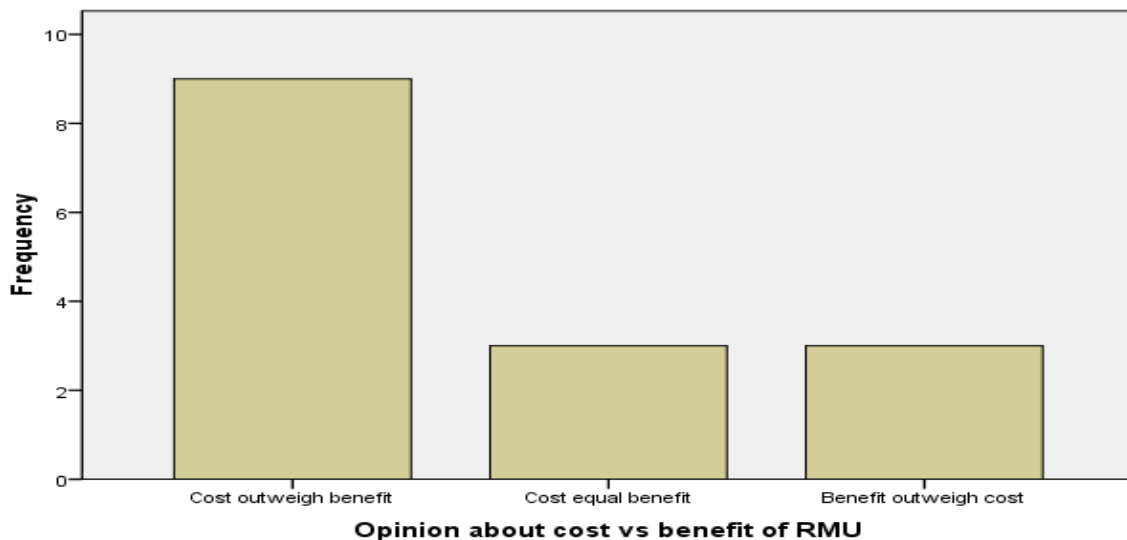
In-Depth Interview Summary

Data collected from in-depth interviews still show skepticism among respondents regarding the implementation of RMU. Most of them believe that the use of RMU in official transaction is still hard to apply. There are number of issues behind it. First, expected role of RMU. If it will be used as one of indicators for surveillance mechanism then it will be rather easier to apply provided that all members agree on what currency to be included, what currency chosen as an anchor, and how the weight is determined. However as unit of account or even further for medium of exchange, the implementation of RMU will be very hard to apply. Then, economic disparity among country members. Admittedly, development's gap between ASEAN+3 countries are still large which may lead to asymmetric problem during the implementation of RMU. The differences in policy level (fiscal, monetary, and exchange rate) also serve as threat regarding the implementation of RMU. So synchronization process, as a mean to have economic integration within the region, will take a long time. Lastly, country's sovereignty. The implementation of RMU will alleviate policy making power in monetary, fiscal, and exchange rate. Current European Crisis has surely warned us about the risk of having such a rigid policy space. Moreover, the implementation of RMU will only succeeded if each country has politically committed to apply the RMU which still has been questioning until now.

Regarding the implementation of RMU for private use, respondents have varied answers. As indicator for competitiveness, the implementation of RMU for private use is easier to apply. It can be done simply by informing well the private sectors about the presence of RMU. However, if RMU is considered to take more advanced role like denomination in transaction, private capital/bonds market, or banking activities, the implementation will be more difficult. Actually private sectors are used to analyze from business perspective: whether using RMU will make them more profitable or not. Unfortunately intra-region trade and investment, excluding + 3 countries (Japan, China, and Korea) are still low. Furthermore, most of the private sectors still use US Dollar as currency for settlement since their commodity prices are set in US Dollar. Thus it is important to assure the stabilization of RMU rate and the availability of RMU in markets. Additionally, mixed of clear settlement process from the central bank and interesting incentives from the government can be good stimulus for the private sectors to use RMU.

Respondents have noted several necessary conditions for implementing RMU. The most basic necessary condition for implementing RMU is commitment. RMU is an actualization of member countries willingness in enhancing economic cooperation as the aim to be ASEAN+3 economic integration. Implementing RMU will officially result in higher dependency which may lose each country's policy making power. Unless each country is highly committed to RMU, the integration process will be failed. Second, sound economic condition. Learning from EU's experience, the similarity of economic development is a key factor for successful integration. Additionally, it demands also stable economic condition in the region shown by supporting macroeconomic indicators and political stability. Third, leading country. Admittedly, the successful economic integration in EU can't be happened without the role of Germany as the leading country. The Deutsche Mark had been the anchor for European Currency Unit (ECU). Additionally, Germany's has been a strong and powerful leader in terms of politic during the integration process. Fourth, preparing institutional set-up. RMU cannot be just another side-job for ASEAN Secretariat. Thus, an institution should be established for focusing on managing as well evaluating the implementation of RMU. Also, settlement mechanism for RMU should be set up to clarify the link between all the involved institutions regarding the implementation of RMU. Fifth, legal frameworks. Clear legal frameworks, especially in domestic level, are important in order to assure that the implementation of RMU will go well. Sixth, public acceptance. The government and central bank should make good public communication about RMU to vanish the doubt spreading in the society. Without public acceptance, RMU will not work.

Our respondents also mentioned about numerous incentives for catching private sectors' eyes to RMU. Some of them are financial incentives like special swap facility in RMU, lower credit interest rate for loan in RMU, trade tariff differentiation, or lower export tax. Yet, for trade tariff differentiation or lower export tax, some of the respondents see these financial incentives might give reverse effects. The private sectors might get spoiled with this differentiation related to the failed of infant industry argument. Also, the differentiation will provoke other countries to do *Countervailing Duties* which may result in worse situation. Besides those financial incentives, there are more market relying incentives like availability of financial products (banks, capital or bonds markets) in RMU, more efficient transaction process, government bonds denominated in RMU, and especially stable RMU rate. These kinds of incentive arise as respondents' believes to let the markets work for themselves.

The implementation of RMU in Indonesia is facing a hard track. First, it is impossible to establish ASEAN's single market when even Indonesia's export commodities are mostly the substitutes to other ASEAN countries commodities. Indeed, Indonesia is competing with other ASEAN countries in export markets. Then, Indonesia's economic condition is still left behind with the +3 countries and other ASEAN countries like Singapore, Malaysia, and Thailand. Policy divergence in terms of monetary policy, fiscal policy, exchange rate regime, and economic structure, is also large among the ASEAN+3 countries which may complicate the synchronization process. Afterward as emerging market Indonesia surely needs mixed of monetary and fiscal's support for the economic development which definitely will be alleviated by implementing RMU. Actually, Indonesia's economy is growing rapidly that may exceed the +3 countries. Also, Indonesia's domestic market is large and still underdeveloped the potency. So if the government is going to apply RMU currently, Indonesia might be just a political object. Moreover, US Dollar, Yen, and Euro have been the common currency used in Indonesia for international transactions. Even until now, the implementation of RMU has no clear advantage for Indonesia, whether its advantage outweigh its cost. Yet, no clear mechanism has been informed to the public about the implementation itself.

All of our respondents agree on the necessity to have in depth study on RMU. This study is important to clarify whether implementing RMU is really beneficial for Indonesia. If the study has confirmed the benefits of RMU, the next step is creating public awareness. Intense socialization to the public is substantial to bring up the public stigma regarding the implementation of RMU. Meanwhile, an institution focusing on RMU, legal framework and settlement process of RMU need to be set up (institutionally prepared). Additionally, good quality and openness of data, which still don't happen in most member countries, are needed for calculating RMU. Also noted to

implement RMU successfully, the member countries should have sound economic development and stable political condition. Thus they will implement RMU right in time, not premature. To achieve that, +3 countries should note the importance of financial supports to elevate other countries. Then international trade and investment among the member countries should be strengthened to make the implementation of RMU worthy. Regarding the large policy divergence among ASEAN+3 countries, common platform should be formulated through the consensus (harmonizing the divergence). Lastly, the implementation should be done gradually. For example, Singapore, China, Japan, and Korea might be the founding fathers for RMU. Then in 2015, it would be followed by Indonesia, Malaysia, Philippines, and Thailand. Vietnam will catch up in 2020. Lastly, Cambodia and Laos can join in 2020.

Briefly, here is the roadmap to implement RMU as suggested by the respondents. The first step is setting up clear framework of RMU with clear target and milestone. In this roadmap, the respondents assumed that RMU would implement gradually with policy dialogue as the mile stone. As experienced in any G-20 meetings, the most basic surveillance mechanism is by peer's pressure. When several countries merging as one group, every members will eventually take a good care of what others do. It's clearly shown on how US attacked the undervalue Yuan by bringing up to the crowd the necessity of more market relying exchange rate. The more significant the group will lead to higher peer's pressure. So through intense policy dialogues, ASEAN+3 countries have initiated to prepare for tighter commitment level like RMU. While having more intense public dialogue, issue of RMU can be delivered to the public to create public awareness.
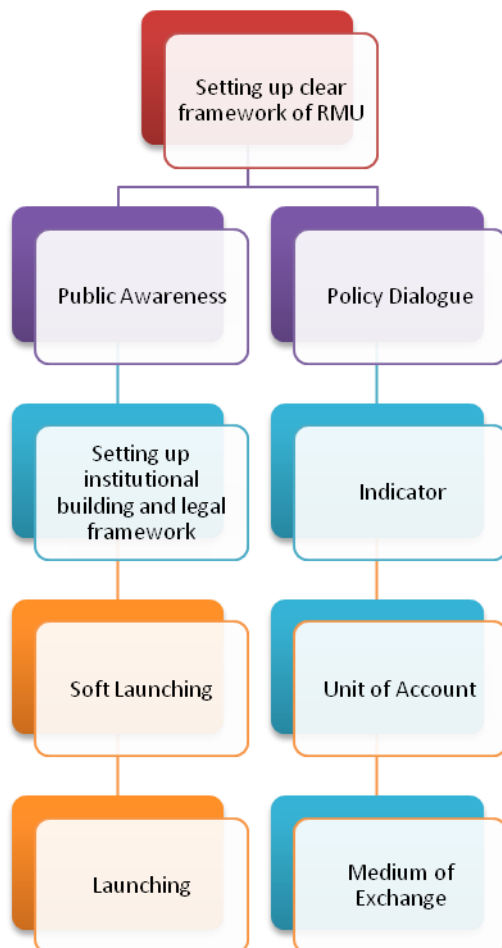
In the roadmap, our respondents assumed that RMU will be implemented as surveillance and relative competitiveness indicator first, and then followed by unit of account and medium of exchange. RMU is a more advanced and committed surveillance indicator. If peer's pressure still can be denied somehow, RMU gives openness to the public that anyone can see whenever the divergence appears. As noted before, RMU would make the data that previously enclosed to the public able to be seen transparently now.

Consequently, all member countries will no longer have independency in intervening exchange rate market and in terms of monetary or fiscal policy which both have direct effect to RMU. Also, RMU can indicate relative competitiveness as addition to the existing Real Effective Exchange Rate (REER). Meanwhile, institutional building and legal framework are setting up to accommodate the implementation of RMU. After RMU has performed successfully as surveillance and relative competitiveness indicator, more advanced role can be implemented.

As unit of account, RMU would be a standard monetary unit of measurement of value/cost of goods, services, or assets. The most compatible example is Special Drawing Rights (SDRs), a basket of currencies calculated by a fixed amount of Japanese Yen, US Dollars, British Pounds

and Euros. SDRs is used to denominate IMF member country's foreign exchange reserve assets. RMU as unit of account is a pilot project for preparing RMU to take greater role, as medium of exchange. So it's called as soft launching.

Lastly, RMU serves as medium of exchange. RMU is used as denomination in transaction (invoicing), in banking activities (deposit and credit), and in private capital market/bonds market. Indeed, RMU turns into a currency. However, most of respondents still have varied answers about how to treat RMU. Some respondents believe special treatment needed in the early step of implementing RMU. However after the induction process is finished, most of them agree that RMU should be treated as foreign currency.

There are several measures recommended by the respondents for determining currency weight in RMU: GDP per capita at PPP, GDP at PPP, and Intra ASEAN+3 Trade share (Export and import). These are preferable measures where Indonesia's position is accommodated well. Then the respondents argued that 2009 is the most recommended base year. In 2009, most of the member countries have recovered from global financial crisis. Also, in 2009 Indonesia experienced low inflation rate, high economic growth, and stable exchange rates fluctuation which generated a very sound economic condition. Additionally, base year should be the most current to the implementation itself, so 2009 is still reliable. Afterward, the weight revision for RMU will be done regularly once a year and subject to change if there is any significant change in economic variables of the member.

For the scope of implementation, most of the respondents answered ASEAN+3. ASEAN+3 can form a RMU, since the inclusion of +3 make size of intra-ASEAN+3 trade and investment large enough. Moreover, Japan, China, and Korea have significant positions in the world order which can lift up the bargaining position of ASEAN+3. However including +3 also brings more challenges. First, it may enlarge the economic disparity existing among the members. This divergence could derive in more unequal benefits obtained by each country. Least-developed countries will be only exploited objects by the +3. Second, China and Japan have been life-time rival which may lead to chaos in determining the leading country for RMU. In terms of GDP and trade volume, Japan and China can become a candidate to be the leader. But both have weaknesses. Japan exchange rate quite volatile against major currency and this could become a challenge to RMU if using yen as an anchor currency. Also, Japan has a huge number of public debts. On the other hand, China's ER policy quite closed and Renminbi is inconvertible currency that make this currency becomes difficult to be an anchor. So policy coordination would be more difficult.

From the interviews, it can be implied that pessimism is still spreading out regarding the implementation of RMU. Most of the respondents argued that ACU would be less success than ECU. The high degree of heterogeneity in ASEAN+3 countries would make the synchronization process for ACU harder than ECU. This divergence will imply in varied necessity in policy level among the members which complicates the policy coordination for RMU. Still, RMU is possible and concrete to be applied, but not in the short run. Undeniably current Rupiah's appreciations to US Dollar as the Fed's policy to print out more US Dollar, and the global financial crisis have made US Dollar losing its credibility. This would serve a good momentum for arising RMU's issue.

In conclusion, most of respondents assessed that Indonesia will gain more costs than benefits by joining RMU. Lots of domestic homework, such as unemployment, poverty, education, health, and infrastructure should be addressed first before moving to more global economy. Moreover, surrendering independency in policy making is costly, especially for a rapid growing economy like Indonesia. Also, it has huge risks as experienced in the Greek Crisis. Besides that, some respondents believe that using local currencies for intra-trade and investment might be a better alternative as the aim of strengthening economic corporation among ASEAN members. It won't cause loosing independency, indeed gaining more sovereignty.

VI.CONCLUSION AND RECOMMENDATION

6.1 Conclusion

Based on in-depth interviews of this research it reveals that in general it still show skepticism among respondents regarding the implementation of RMU

1. Practical use of RMUs for macroeconomic surveillance.

The implementation of RMU for macroeconomic surveillance in Indonesia is facing a hard track, since this is also related with other countries in the region. First, it is impossible to establish ASEAN's single market when even Indonesia's export commodities are mostly the substitutes to other ASEAN countries commodities. Second, Indonesia's economic condition is still left behind with the +3 countries and other ASEAN countries like Singapore, Malaysia, and Thailand. Finally, policy divergence in terms of monetary policy, fiscal policy, exchange rate regime, and economic structure, is also large among the ASEAN+3 countries which may complicate the synchronization process.

2. Official use and private use of RMUs as denominator of transactions

Most of respondents believe that the use of RMU in official transaction is still hard to apply. There are number of issues behind it. First, expected role of RMU, and second is economic disparity among country members. Lastly, is country's sovereignty. The implementation of RMU will alleviate policy making power in monetary, fiscal, and exchange rate.

Regarding the implementation of RMU for private use, respondents have varied answers. As indicator for competitiveness, the implementation of RMU for private use is easier to apply. It can be done simply by informing well the private sectors about the presence of RMU. However, if RMU is considered to take more advanced role like denomination in transaction, private capital/bonds market, or banking activities, the implementation will be more difficult.

3. Design a roadmap to the use of RMUs

In the roadmap, our respondents assumed that RMU will be implemented as surveillance and relative competitiveness indicator first, and then followed by unit of account and medium of exchange. RMU is a more advanced and committed surveillance indicator. If peer's pressure still can be denied somehow, RMU gives openness to the public that anyone can see whenever the divergence appears. As noted before, RMU would make the data that previously enclosed to the public able to be seen transparently now. Consequently, all member countries will no longer have independency in intervening exchange rate market and in terms of monetary or fiscal policy which both have direct effect to RMU

This study also shows that pessimism is still spreading out regarding the implementation of RMU in indonesia. Most of the respondents argued that ACU would be less success than ECU. The high degree of heterogeneity in ASEAN+3 countries would make the synchronization process for ACU harder than ECU. This divergence will imply in varied necessity in policy level among the members which complicates the policy coordination for RMU. Still, RMU is possible and concrete to be applied, but not in the short run. Undeniably current Rupiah's appreciations to US Dollar as the Fed's policy to print out more US Dollar, and the global financial crisis have made US Dollar losing its credibility. This would serve a good momentum for arising RMU's issue.

Secondary data analysis showed that Indonesian CMI nominal tend to diverge from AMU. The divergence especially happened since 2005, when Indonesia experiencing structural break according to the extreme rise of gasoline price. In period 2008-2009, Indonesia/AMU exchange rate tend to appreciate, but in period 2010, Indonesia/AMU exchange rate was relatively stable. In

terms of volatility, the volatility of Rupiah/AMU was smaller than volatility of Rupiah/USD since 2006. It can be the starting point for Indonesia to consider RMU in its exchange rate policy.

6.2 Recommendations

1. All of our respondents agree on the necessity to have in depth study on RMU. This study is important to clarify whether implementing RMU is really beneficial for Indonesia. The respondents also agree about the possible use of RMU for first step is as divergence indicator (surveillance mechanism).
2. If the study has confirmed the benefits of RMU, the next step is creating public awareness. Intense socialization to the public is substantial to bring up the public stigma regarding the implementation of RMU. Meanwhile, an institution focusing on RMU, legal framework and settlement process of RMU need to be set up (institutionally prepared).
3. Some important technical issues about RMU are including the weight of RMU, base year, RMU leader, as well as institutional infrastructure. The study finds the preferences of GDP and trade as a weight for RMU and also the importance of institutional set up for RMU preparation. The incentive for private sector is also important for the use of RMU in private transaction.
4. Additionally, good quality and openness of data, which still don't happen in most member countries, are needed for calculating RMU. Symmetric information among member is very important.
5. Also noted to implement RMU successfully, the member countries should have sound economic development and stable political condition. Thus they will implement RMU right in time, not premature. To achieve that, +3 countries should note the importance of financial supports to elevate other countries.
6. Then international trade and investment among the member countries should be strengthened to make the implementation of RMU worthy. Regarding the large policy divergence among ASEAN+3 countries, common platform should be formulated through the consensus (harmonizing the divergence).
7. Lastly, the implementation should be done gradually. For example, Singapore, China, Japan, and Korea might be the founding fathers for RMU. Then in 2015, it would be followed by Indonesia, Malaysia, Philippines, and Thailand. Vietnam will catch up in 2020. Lastly, Cambodia and Laos can join some years later.

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Appendix : Research Questionnaire

<u>In Depth Interview Form</u>
POSSIBLE USE OF REGIONAL MONETARY UNITS-
IDENTIFICATION OF ISSUES FOR PRACTICAL USE

University of Indonesia and ASEAN Secretariat

1. What is your opinion about the use of RMU in official transaction?
    a. Very hard to apply
    b. Hard to apply
    c. Easy to apply
    d. Very easy to apply

    Explanation
    _____
    _____

2. What is your opinion about the use of RMU in private transaction?
    a. Very hard to apply
    b. Hard to apply
    c. Easy to apply
    d. Very easy to apply

    Explanation
    _____
    _____

3. What are the **most** possible uses of RMU in official transactions?
    a. Divergence Indicator/surveillance mechanism
    b. Settlement between central bank
    c. Central bank intervention
    d. Other, specify_____

4. What are the **most** possible uses of RMU in private transactions ?
    a. Indicator of relative competitiveness for exporter/importer
    b. Denomination in transaction (invoicing)
    c. Denomination in private capital market/bonds market
    d. Denomination in banking activities (deposit and credit)
    e. Other, specify_____

5. How **should** we treat RMU ?
    a. As a foreign currency
    b. Given special treatment
    c. The same as national currency

6. What role that the **most suitable** for RMU ?
    a. unit of account
    b. store of value
    c. medium of exchange

7. Please rank the variables below describing your preference for determining currency weight in RMU.
    ___ GDP

___ GDP per capita
___ GDP per capita at PPP
___ CMIM weight (Chiang Mai Initiative Multilateralization)
___ Budgetary contribution in surveillance process
___ Intra ASEAN+3 Trade share (Export and import)
___ Other, specify

8. What year do you think the most suitable for base year in RMU?
   a.2000   f.2005
   b.2001   g.2006
   c.2002   h.2007
   d.2003   i.2008
   e.2004   j.2009

   Explanation
   _____
   _____

9. Which group of countries the most suitable for RMU or ACU?
   a. All ASEAN countries members (10 countries)
   b. All ASEAN countries members + Japan, China , Korea (ASEAN+3)
   c. All ASEAN countries members + Japan, Korea (ASEAN+2)
   d. Other, specify_____

   Explanation
   _____
   _____

10. Which countries that most suitable for the leader in RMU or ACU?
    a. Japan   c.Korea
    b. China   d.Singapore

11. When do you think the time for weight revision in RMU?
    a. Every once a year regularly
    b. Every five years regularly
    c. If there is significant change in economic variables of the member
    d. If the weight of any currencies has changed by 25 percent or more
    e. When there is new country joining the RMU
    f. Other, specify_____

12. What are necessary condition for implementing RMU
    a._____
    b._____
    c._____
    d._____

13. What institutions should we prepare for RMU?
    a._____
    b._____
    c._____
    d._____

14. What should we prepare for the incentive for private sector in using RMU?
    a._____
    b._____
    c._____

d._____

15. What is your opinion about ACU compared to ECU?
    a.   ACU would be less succeed than ECU
    b.   ACU would be as successful as ECU
    c.   ACU would be more succeed than ECU

    Explanation
    _____
    _____

16. What are the obstacles in implementing RMU in Indonesia ?
    a._____
    b._____
    c._____
    d._____

17. How should we handle those obstacles stated in 16?
    a._____
    b._____
    c._____
    d._____

18. Specific for Indonesia, what is your opinion about cost versus benefit of joining RMU?
    a.   Cost outweigh benefit
    b.   Cost equal benefit
    c.   Benefit outweigh cost

19. Please specify your recommendation for Indonesian policy maker in facing RMU
    _____
    _____

20. Please give us suggestion about the roadmap to implement RMU in Indonesia
    _____
    _____
    _____
    _____

******Thank you very much for your participation**********

The results of this interview would be used only for this academic research aims
And the database only use in aggregate terms
The individual data will not be published