Can the Asian Currency Unit enhance financial integration in East Asia? A discussion from the lessons of the European Currency Unit experience.

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#### Abstract

Regional integration of East Asian (ASEAN + 3) countries has sharply increased over the last two decades, as measured by the ratio of intra-regional trade to total trade, which is about 50per cent. In contrast, financial integration at the regional level has been more sluggish. The share of intra-regional portfolio flows to total cross-border portfolio flows of East-Asian countries is only 5per cent. As far as capital flows are concerned, inter-regional integration still dominates intraregional integration.

Since 2003, policy initiatives ("Asian Bond Market Initiative", "Asian Bond Funds") have been taken in order to foster the development of bond markets in East Asia. More recently, there have been talks about a proposed index of regional currencies, which is now being referred to as the "Asian Currency Unit" (ACU). The primary purpose of the ACU would be to facilitate the development of an Asian multi-currency bond market, in order to strengthen capital markets of the region and make them resistant to external shocks. Can ACU really enhance the financial integration of East Asia? This is the core question that we would like to address in this paper.

The theoretical aspect of the discussion deals with the link between the currency in which assets and liabilities are denominated and the location (country base) of claimers and debtors. What is at stake is whether ACU-denominated assets and liabilities provide for a higher portion of total regional (East Asian) savings to be invested within the region.

For scholars and practitioners in European finance, such a question has a flavor of "déjà vu". The ACU, which is being designed under the patronage of the Asian Development Bank, is modelled on the European Currency Unit (ECU), which was the forerunner of the euro during the 1975-1999 period. Proponents of the ACU seem to expect the same kind of advantages from this basket of Asian currencies as those that were expected from the ECU in the 1980s. The ECU was supposed to give microeconomic advantages to borrowers and lenders (currency diversification benefits). At a macro-financial level, the ECU was said to be able to channel more of Europe's savings to investment opportunities within the region, and thus, to strengthen financial integration in Europe. The European experience teaches that the ECU played a limited part in that respect: the share of ECU-denominated bonds reached 15 per cent of all non-dollar Eurobonds, and ECU-denominated claims reached only 10 per cent of the non-dollar foreign currency claims of banks. The move toward an integrated financial market at the European scale had to wait the 1990s and the provisions of the Single Act regarding the banking and financial industry. Above all, a decisive role was played by the launching of the euro: since 1999, an impressive convergence of bond yields on domestic financial markets has been observed, showing that European integration of capital markets is

on the way. Having in mind the European experience of the use of a currency unit on capital markets helps to understand the present issues and prospects of the ACU.

The paper develops these two aspects – theoretical and historical. The conclusion is that, although the ACU will not by itself be sufficient to enhance financial integration in East Asia, it may add to policies aiming specifically at developing capital markets in the region.

Keywords: currency baskets, bond markets, East Asia, Europe

JEL Classification: F15, F36, O 52, O 53

#### 1. Introduction

There have been talks in the last months about a proposed index of regional currencies, which is now being referred to as the "Asian Currency Unit" (ACU). The first move came from the initiative of the Asian Development Bank (ADB) who declared in March 2006 that it was working on the formulation of a conceptual currency unit based on a package of Asian currencies in order to promote regional economic cooperation and development. In a joint statement released in Hyderabad on 4 May 2006, ASEAN+3 Finance Ministers declared that they would endorse a research topic on exploring steps to create regional monetary units<sup>1</sup>. In June, some US officials declared that they did not see the ACU as a competitor to the dollar, and that they would not oppose an ACU initiative. In August, the press reported that Japan and China backed the launching of an ACU.

Against this encouraging background, the ADB is examining proposals to decide which currencies to include in the index and assigning weights to them. One proposal favors including currencies of the 13 countries of the ASEAN + 3 group, which have been working to increase mutual trade and promote closer economic and financial links among their economies.

This paper addresses the possible impact of the launching of an ACU on financial integration in East Asia, and especially, on bond markets in the region. Since 2003, policy initiatives ("Asian Bond Market Initiative", "Asian Bond Funds") have been taken in order to foster the development of local currency denominated bonds. Additionally, it is often reported that the primary purpose of the ACU would be to facilitate the development of an Asian multi-currency bond market, in order to strengthen the capital markets of the region and make them resistant to external shocks. Can ACU really enhance financial integration in East Asia?

For scholars and practitioners in European finance, such a question has a flavor of "déjà vu". The ACU, which is being designed under the patronage of the Asian Development Bank, is modelled on the European Currency Unit, which was the forerunner of the euro during the 1975-1999 period. Proponents of the ACU seem to expect the same kind of advantages from this basket of Asian currencies as those

<sup>1</sup> Ten member states of the Association of Southeast Asian Nations plus China, Japan and South Korea.

that were expected from the ECU in the 1980s. The ECU was supposed to give microeconomic advantages to borrowers and lenders (currency diversification benefits). At a macro-financial level, the ECU was said to be able to channel more of Europe's savings to investment opportunities within the region, and thus, to strengthen financial integration in Europe. We believe that the European experience of the use of a currency unit on capital markets can enlighten the discussion on the present issues and prospects of the ACU. What is at stake is whether ACU-denominated assets and liabilities provide for a higher portion of total regional (East Asian) savings to be invested within the region.

In order to discuss this issue, the rest of the paper is structured as follows: section 2 examines the present state of financial integration in East Asia; section 3 discusses the features of a possible ACU that would be inspired by the ECU; section 4 discusses the role played by the ECU in regional financial integration in Europe; section 5 casts light on the importance of political commitment in the success of a regional currency basket; section 6 concludes.

### 2 - Financial integration in East Asia: a brief assessment

Financial development in the East Asian region taken as a whole has two weaknesses. Many countries have still limited capital markets and are imposing restrictions on international capital flows. The pattern of capital flows shows that inter-regional integration still dominates intraregional integration.

# 2.1. Although increasing, the level of financial integration in East Asia remains low

Regional integration of East Asian (ASEAN + 3) countries has sharply increased over the last two decades, as measured by the ratio of intra-regional trade to total trade, which is about 50 per cent. By contrast, financial integration at the regional level has been more sluggish.

#### - The size of domestic financial markets is still limited

We document in Table 1 the size of local currency bond market in 1999 and 2006. Over this period, bond markets have expanded at a rapid pace in China, Korea and Thailand. The bond markets in each country have been steadily growing with government bonds playing a central role. However with the exception of Japan, China and Korea, sizes still remain small and some markets face major bottlenecks due to a narrow investor base and a lack of active dealers.

#### - Capital controls remain high in many East Asian countries

Almost all the economies of East Asia have widely opened their current account transactions, but very few so far have made similar efforts to liberalize their capital account transactions. Restrictions on capital transactions still remain significant in nearly all East Asian markets, excepted for the most advanced ones (Japan, Hong

Kong, Singapore). This is illustrated by the recent values of a capital control index in Table 2.

Table 1 Size of local currency bond market in 1999 and 2006

	as of December 1999		as of July 2006	
	% of GDP	USD billion	% of GDP	USD billion
China	21.7	215.0	45.6	1,099.9
Hong Kong	35.6	57.1	49.3	90.4
Indonesia	32.0	49.3	19.5	60.2
Korea	59.6	265.6	89.9	745.1
Malaysia	83.6	66.1	93.3	130.7
Philippines	30.3	23.0	41.2	38.5
Singapore	45.2	37.4	71.2	90.7
Thailand	27.0	33.1	45.9	96.3
Japan	131.8	6,536.0	200.1	9,133.2

Source: Asiabond Online website

(http://asianbondsonline.adb.org/regional/regional.php)

Table 2 Capital control index  $(1996-2001)^2$ 

	Average 1996-2000	Average 2000-2003
 China	0.825	0.857
Hong Kong	0.214	0.143
Korea	0.743	0.786
Malaysia	0.786	0.857
Singapore	0.328	0.357
Thailand	0.743	0.786

Source: Xiao and Kimball (2006)

As a result, East Asia's financial area is fragmented and the levels of cross-market differentials in interest rates and bond yields remain significant: in 2004-2005, the average absolute cross-market differential ranged from 300 (short term rates) to nearly 400 basis points; the absolute uncovered interest rate differential was about twice more (Asian Bond Monitor, 2004)<sup>3</sup>.

<sup>&</sup>lt;sup>2</sup> The Capital Control Index (CCI) is based on the observation of 14 categories of capital account transactions, each of them being evaluated with a 0/1 dummy indicating whether a country regulates (1) or not (0) that specific transaction. The value of the CCI ranges from 0 (no control at all on any of the 14 transactions) to 1(all categories are imposed at least some degree of control).

<sup>&</sup>lt;sup>3</sup> For nine countries: People's Republic of China; Hong Kong, China; Indonesia; Japan; Korea; Malaysia; Philippines; Singapore; Thailand; Vietnam.

# 2.2. Much of East Asian financial resources are invested outside the region

There is not much evidence that intra-regional financial transactions are significantly increasing. East's Asia intra-regional cross-border portfolio investment still represents a small portion of the region's total cross border portfolio flows. Much of the savings of the region tends to leave for investment in developed countries rather than in the region. Table 3 shows that the share of intra-regional capital flows to total cross border flows is very low in East Asia (4.9%) and does not compare well with the corresponding figures in Europe and the North American Free Trade Agreement region.

Table 3 Cross-border portfolio flows (2003, percentage of total)\*

		Investment from	
	NAFTA	EU15	East Asia
Investment to			
Total portfolio			
Investment			
NAFTA	(15.8)	(18.6)	(33.5)
EU15	(46.7)	(63.5)	(36.1)
East Asia	(13.7)	(4.4)	(4.9)
ROW	(23.8)	13.5)	(25.5)
Total global	(100.0)	(100.0)	(100.0)
Long-term debt			
securities			
NAFTA	(21.4)	(15.3)	(34.1)
EU15	(45.4)	(69.0)	(38.2)
East Asia	(5.9)	(1.9)	(2.7)
ROW	(27.3)	(13.8)	(24.9)
Total global	(100.0)	(100.0)	(100.0)
Equity securities	9		
NAFTA	(13.4)	(23.7)	(34.7)
EU15	(44.8)	(53.6)	(27.8)
East Asia	(18.0)	(9.3)	(10.9)
ROW	(23.9)	(13.3)	(26.5)
Total global	(100.0)	(100.0)	(100.0)

Source: Adapted from Asian Bond Monitor, Nov. 2005, p. 22.

Note: \* Global total is 6,987 USD billion.

A similar pattern holds for cross-border bank borrowing and lending: claims by Asian banks on either North America or the European Union grew faster and were larger over the 1999-2005 period than Asian bank claims on Asia (IMF, 2006).

### 2.3. Comparing financial integration in East Asia to the European situation

The pattern of financial integration in East Asia is a global one, not a regional one: countries in the region have developed deeper financial links with Europe and the United States than with one another<sup>4</sup>. Chai and Rhee (2005) have addressed this issue in their empirical analysis of the opening of stock markets from 1991 to 2001 in 10 East Asian counties<sup>5</sup> and 15 European countries (the 15 EU starting members). They demonstrate that, contrary to Europe where the progress in financial integration is due to deepening regionalism, the opening of financial markets in East Asia has led to increasing cross correlations with the US market. This study confirms that the global factor has been the main element in East Asian financial integration. This diagnosis is confirmed when looking at integration through bank credit flows. Eichengreen and Park (2003) have compared financial transactions within Europe and within Asia, by focusing on cross border bank credit flows. The conclusion is that Europe is ahead of East Asia, where the increase in intra-regional credit flows has been slow.

But, interestingly enough, East Asia today compares well with the situation that Europe experienced some 30-40 years ago. Eurocurrency credit and bond markets appeared in Europe in the 1960s and rose dramatically in the 1970s: relying heavily on the eurodollar, these markets allowed for channelling savings to investment at a global scale, and they set a pattern of capital flows where direct financial links between countries of the European Economic Community were rather marginal.

The still low level of integration in East Asia has two important drawbacks:

1/ First, it implies that East Asian countries are vulnerable to currency mismatching and exchange rate volatility. Ultimate East Asian lenders and borrowers are not directly linked as they could be, should the regional bond market exist. The dominant financial integration pattern is a global one, which means that the biggest part of regional savings is channelled to extra-regional investment, mostly dollar-denominated. In parallel, regional borrowers with important financial needs tap international markets rather than domestic markets in the region, and thus raise dollar-denominated debt to a large extent. Developing capital markets at a domestic and regional level would limit risky currency mismatches between assets and liabilities of East Asian residents.

2/ The second drawback is that real integration by trade and foreign direct investment in East Asia may be hampered if the process of financial integration is lagging behind. At the national level, there is empirical evidence that financial

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<sup>&</sup>lt;sup>4</sup> See Lee, Park and Shin (2004).

<sup>&</sup>lt;sup>5</sup> ASEAN + 3, with the exception of Brunei, Cambodia, Laos and Vietnam - plus Hong Kong.

development is supportive of economic growth<sup>6</sup>. We would guess that the same should hold at the regional level, although such a statement lacks of theoretical and empirical groundings. Financial development should take place at a regional level in East Asia in order to keep pace with the region's *de facto* integration by trade, and to facilitate deeper economic integration of the region, which we assume is the road that East Asian countries will choose, sooner or later.

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It has been argued by many experts that the development of large and efficient local-currency denominated bond markets could reduce incentives for lenders and borrowers to rely on counterparts out of the region. In addition to efforts being made independently by each country, the strengthening of bond markets has entered the framework of regional cooperation. In June 2003, an Asian Bond Fund was established to facilitate bond issuance. The "Asian Bond Initiative" was agreed by ASEAN + 3 finance ministers in August 2003. In December 2004, central banks of East Asia and Pacific agreed on purchases of Asian-currency denominated bonds. All these steps should initiate the development of a regional market for bonds denominated in Asian currencies. Lastly, it has been argued that the setting of an ACU could play a part in the emergence of a truly regional capital market. This assumption is discussed in the following two sections.

# 3. An Asian Currency Unit on the ECU model?

The idea of an Asian basket currency, defined as a weighted average of a collection of Asian currencies, emerged almost 10 years ago, prior to the Asian currency meltdown. It was discussed by scholars within the prospective frame of monetary integration in East Asia. The concept was resurrected in March 2006 by the Asian Development Bank (ADB) and has been receiving since then much attention.

The Asian Currency Unit which is presently being developed by the Asian Development Bank is a notional unit of exchange based on a currency basket, that is, a weighted average of currencies used in ASEAN + 3 countries. Paralleling the definition of the ECU, the ACU would be defined as a fixed number of units (quantities) of each of the constituent currencies, reflecting each country's relative importance in the regional GDP and trade. The variation of exchange rates would entail the variation of the contribution of each component currency (weight) to the value of the ACU. Ongoing discussions bear on the currency composition of the ACU and on the calculation of each currency's representation in the basket.

Technically, the ACU would be designed from the ECU blueprint. This is why it is seems relevant to shed light on the nascent ACU story from the already written ECU story. What were the effective performances of the ECU, and why did it not work that much, contrary to optimistic views that were expressed?

<sup>6</sup> Since the pioneer works of R. Goldsmith, many empirical research has been conducted on the relationship between financial development and growth. For a survey, see R. Levine (1997).

# 3.1. What was the ECU? Theory and facts

The European Unit of Account (EUA) was officially created by a decision of the European Council on 21 April 1975. The EUA was renamed "ECU" when the European Monetary System (EMS) was established in December 1978, and started to work in March 1979. The ECU ceased to exist on 4 January 1999, when it was superseded by the euro at par.

The monetary nature of the ECU – and, particularly, its ability to fulfill some, if not all, of the functions of money – has been widely discussed in the 1980s. During this 24 year-period (1975-1999), the ECU fulfilled some, but not all the functions of money (unit of account, medium of exchange, storage of value).

The European Unit of Account was initially introduced as an official accounting unit of the European Economic Community (EEC). At its inception, it was designed to denominate the amount of European subsidies to African, Caribbean and Pacific Area countries in application of the Lomé convention. The EUA was adopted in 1975 as the accounting unit for the European Development Fund. It also became the unit of account of the European Investment Bank and of the budget of the European Coal and Steel Community.

The EUA was a basket made of all currencies of EEC countries, each of them entering the basket with a weight representing the country's size (GDP) and importance in intra-European trade. The composition of the unit was fixed, but its value bound to change. On 21 April 1975, the starting value of the EUA was set to worth exactly 1 SDR (special drawing right), but from the day after onward, its value changed as EUA and SDR had a different basket composition.

The EUA was renamed ECU at the creation of the European Monetary System. One major innovation was the provision for periodical revision of the currency quantities in the basket (this provision allowing for the entry of additional currencies after EC enlargements). During the 1975-1999 period, the composition of the ECU changed twice, as shown in Table 4.

The ECU was created by governments of EEC countries for an *official use* in the EMS. But its existence raised interest among market participants, and its *private use* progressively developed. We describe here the role played by the ECU by combining the three functions of money and the two types of uses (official or private) (as summarized in Table 5).

Table 4 Composition of the ECU (amount of each national currency)

1	13 March 1979	17 September 1984	21 September 1989
Belgian and Lux. Fra	nc 3.80	3.71	3.431
Danish krone	0.217	0.219	0.1976
Deutsche mark	0.828	0.719	0.6242
Dutch guilder	0.286	0.256	0.2198
French franc	1.15	1.31	1.332
Greek drachma	_	1.15	1.44
Italian lira	109.0	140.0	151.8
Irish punt	0.00759	0.008781	0.008552
Portuguese escudo	_	_	1.393
Spanish peseta	_	_	6.885
UK pound sterling	0.0885	0.0878	0.08784

#### Official use of the ECU

The ECU played a pivotal role in the EMS by fulfilling to various degrees the three functions of money. First, the ECU was the *unit of account*, or *numéraire* for the Exchange Rate Mechanism (ERM). The official value (central rate) of each currency was expressed in ECU. A grid (known as the ERM's parity grid) was established to express bilateral cross rates of ERM currencies. The ECU was set as an anchor, from which any divergence of national currency from its central rate could be monitored. Actually, central banks and market operators focused their attention on bilateral rates (for instance, French franc against Deutsche mark) rather than on central rates.

In the EMS, currency fluctuations had to be contained within a margin of 2.25 per cent around the bilateral rate (the Italian lira being allowed a margin of 6 per cent)<sup>7</sup>. Under the ERM, national monetary authorities had to take appropriate measures once their currencies' value relative to the ECU diverged beyond a certain threshold. Interventions on the foreign exchange markets were very common: central banks could carry them out in any of the ERM currencies. They could also borrow from other central banks in order to facilitate interventions. Credits within the EMS were denominated in ECU, but extended in national currencies. Currency positions generated by such credits could be paid back in ECU<sup>8</sup>. This was the very first use of the official ECU as a *settlement currency*. As a consequence, central banks used to hold ECU balances with the European Monetary Cooperation Fund, thus giving to the

<sup>7</sup> In August 1993, margins were enlarged to 15 per cent.

<sup>&</sup>lt;sup>8</sup> The settlement could be made in ECU for a maximum of 50 per cent of the borrowing (and 100 per cent from 1987 onward).

ECU the status of a *reserve currency*. Central banks could create their ECU holdings against the deposit of gold and dollars to the European Monetary Cooperation Fund.

#### Private use of the ECU

The most interesting part of the ECU story is that international corporations and market participants started in 1981 to adapt its basket definition to their needs, which stimulated the development of the private ECU market.

The ECU was used as a *unit of account* for invoicing exports or imports, but to a very limited extent only. In countries such as France, or Italy, where invoicing foreign trade in ECU was an interesting option for some companies (multinational groups with a European-wide network of subsidiaries, such as Saint Gobain or Fiat), its share did not exceed 1 per cent of total trade. More importantly, the ECU was used in the denomination of international bond issuances, which was actually the most visible part of its private use. Its financial use developed also in the form of medium-term notes and commercial papers ECU-denominated issuances, which gave it the status of a *reserve currency* in the hands of private investors. In the 1980s, ECU-denominated claims of banks reporting to the Bank for International Settlements reached 10 per cent of total non-dollar foreign currency claims. The market share of the ECU in non-dollar issuances peaked over 15 per cent for Eurobonds, 15 per cent for medium term Euronotes and 10 per cent for eurocommercial paper (IMF, 2006).

Most interestingly, the ECU was also used as a *medium of exchange* for the settlement of private transactions, and could circulate in parallel with national currencies. The settlement of ECU-denominated transactions became possible from the initiative of banks that accepted to open ECU-denominated banking accounts from which ECU holders could order ECU transfers to other ECU-account holders. These accounts were used for instance for the payment of coupons and principal on ECU bonds. Although much less documented, the ECU could also be involved in the settlement of foreign trade, which was ordinarily the case when invoices were denominated in ECU.

From its use in the settlement of private transactions, the ECU was described as a parallel currency, i.e. a kind of private money circulating alongside with national currencies. This outcome could not have been achieved without the active commitment of banks (in Belgium and France especially) that accepted to create ECU accounts for their customers. Another step was the launching of an ECU clearing system under the patronage of the ECU banking association. The ECU clearing was later taken over by the Bank for International Settlements. The ECU banking business also led to arbitraging between the basket and its underlying constituent currencies: in order to balance their ECU assets with corresponding liabilities, banks had to build ECU resources by bundling appropriate amounts of constituent currencies. They could in that way correct the structural imbalance of the ECU market, where spontaneous deposits in ECU were not sufficient for covering outstanding credits in ECU.

Table 5 Official and private uses of the ECU

	Official use	Private use
Unit of account	Anchor currency in the parity grid	Trade invoicing
		Bond denomination
Medium of	Settlement of mutual credits of	Settlement of trade
exchange	central banks for intervention	contracts
	purposes	
		Banking accounts
		Payment of principal and
		coupons on the bond
		market
Storage of value	Official reserve currency	ECU-denominated
		financial assets held in
		private portfolios

## 3.3. What the future of the ACU could be

There are today ACU proponents and supporters, as there were ECU lobbyists some twenty years ago. These ACU supporters use very similar arguments, and describe in a very optimistic view how the ACU could develop, step by step, from its present index nature to a full-fledged genuine currency. We summarize here the major arguments supporting possible uses of the ACU in the future and discuss them in the light of the European experience.

## Possible official uses of the ACU

As a unit of account, the ACU would enable countries to monitor currency fluctuations. ADB would publish the rates of ACU against the US dollar and the euro, as well as against the participating currencies. This regional benchmark would enable policy makers to observe how Asian currencies are moving against each other and how Asian currencies as a whole are moving against external currencies. Deviations from the benchmark rate for each of the East Asian currencies could then be calculated (Ogawa and Shimizu, 2005).

Even in the absence of policy coordination, East Asian countries could announce an official exchange rate of their home currency against the ACU and use the ACU as a reference when applying their exchange rate policy. The ACU could be a useful indicator in exchange rate policy formulation. The ACU would also be useful for the Chiang Mai Initiative swap arrangements because as a common accounting unit it could neutralize the impact of exchange rate development in different directions.

In the wake of the European example, the monetary authorities could make a further step and use the ACU as an accounting unit and numeraire for exchange rate policy coordination in East Asian countries. But are East Asian countries willing to enter into some form of currency management at a regional scale? Are they willing to stabilize cross exchange rates in the region? At the last meeting of the ADB (May 2006), Korea, Japan and China agreed to immediately launch discussions on the road map for a system to coordinate foreign-exchange policy. Should they convincingly decide to take that road, the ACU could find a place in central banks' international reserve portfolios and become a useful tool in their hands for carrying out stabilizing market interventions.

## Possible private uses of the ACU

Contrary to its utilization by monetary authorities, which would not raise technical difficulties once a political agreement was reached for the launching of the ACU, its use by private agents would be more hazardous.

Theoretically, private uses of the ACU may be of two kinds: use in invoicing and settlement of foreign trade (commercial utilization), and use in investment and debt (financial utilization). The economic rules that govern each of these two choices are quite different, and from the teachings of the private ECU experience, one may expect the commercial use of the ACU to be marginal as compared to its financial use.

Exporters generally make out invoices in their own currency, which matches best their costs in their home country (the "Grassman Law"). Or they may resort to a widely used vehicle currency, in a search for greatest liquidity at the lowest cost. This important inertia in the choice of invoicing currencies worked against the utilization of the ECU in foreign trade (which hardly peaked to 1 per cent of total trade invoicing). This very low performance could be explained also by the fact that the ECU circulation never reached the critical level from which it would have benefited from network externalities. And last but not least, the ECU did not have any dedicated territory for a domestic circulation prior to its circulation at the international level - a rather odd an artificial situation compared to other currencies which have to circulate and demonstrate their acceptability at their national level prior to possibly being used between residents and non residents. This congenital weakness of the ECU outpaced by far its theoretical advantages for denominating and settling international commercial transactions 9. Mutatis mutandis, these drawbacks related to the basket nature of the ECU hold for the ACU and work against its use at a significant scale in international trade. Anyhow, this hypothetical use of the ACU by East Asian importers and exporters did not receive so far many comments and was not advocated by ACU supporters. This is a wise discretion from what we know of the reasons why the ECU did not succeed as a parallel currency in international trade.

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<sup>&</sup>lt;sup>9</sup> The major advantages of the choice of the ECU as the currency of denomination of a commercial transaction were: 1/ Less exposure to exchange risk, the ECU being more stable than each of its constituents; 2/ Compromise solution between exporter and importer's weak or strong currency (Ruffini, 1989b).

Contrary to its hypothetical commercial use, the prospects for the utilization of the ACU in the financial sphere have been widely (and favorably) commented. Diversification is a driving force in investment/debt decisions: at the international level, the coexistence of different currencies increases the number of combinations of assets with different risk and return characteristics, and thus, may enhance the efficiency of portfolio allocations. The diversification effect is embedded in multicurrency composition of the ACU (as it was for the ECU). In addition, some suppliers of funds in the region may find attractive to buy ACU-denominated bonds, because of a higher return than that of domestic financial bonds. Some demanders may also find it more profitable, because of a lower cost than that of domestic bonds. This explains why many experts speculate that the benefits of the ACU will come first from its financial use on bond markets.

The private use of the ECU did not prove at all to be efficient in the monetary circulation (medium of exchange), but could not be considered as a marginal phenomenon in the financial sphere, and especially, on international bond markets. This is also the area where the ACU is supposed to bring its most obvious benefits.

# 4. Did the ECU help regional financial integration in Europe?

How far did the ECU support financial integration in Europe? This should be an area of concern for Asian observers and policy makers who see the ECU as a forerunner of the ACU.

## 4.1. The ECU was hoped to prop the surge of a European capital market

In 1983, the European Commission delivered a statement expressing its concern about the low level of financial integration in Europe, pointing that between 1976 and 1980, the volume of intra-European cross border long term capital flows had been twenty times smaller than the volume of intra-European trade (European Commission, 1983). The Commission urged for a restart of the integration process in the financial sphere, and especially for the opening of national capital markets, as is was established that almost no progress had been made since the 1960s to reduce the level of protection of national financial markets.

The low level of financial integration in Europe could be explained by the fragmentation of the financial landscape in Europe, which was worsened by the fact that a large part of intra European capital flows were not denominated in European currencies but in US dollars. This last point needs to be explained here, as it was a major argument for those that advocated a ECU-based strategy for restarting the financial integration process in Europe.

On general grounds, the currency in which an international sale is invoiced and settled is not a core element of the transaction, when the currency of denomination of financial assets is central in investment and borrowing decisions. When economic units located in Europe choose a non European currency for raising debt or investing, they express a preference toward markets and techniques without any specific

European identity. If we suppose for instance that a European firm issues dollar-denominated bonds on the Eurobond market, and that these bonds are finally purchased and held by European investors, we describe a circuit where European savings is channelled to investment in Europe through the vehicle of an external currency, the dollar. This dollar-biased and bypassing savings-investment circuit testifies to the pre-eminence of global financial integration over European financial integration. This was actually the situation of the seventies in Europe, where capital markets were out-competed by the formidable surge of the Euromarkets, with the dollar being was by far the most bid and asked currency. The great bulk of this Eurodollar activity (bonds and credit) was conducted by banks located in Western Europe.

It is against this background that the rise of the private use of the ECU gave ground to an alternative strategy for enhancing financial integration in Europe. The traditional vision had been so far to aim at the forming of a pan-European capital market through the abolishment of capital controls and the setting of institutional links between national exchanges. The "New View" considered that it was worth trying another way, by taking advantage of the integrative power of Euromarkets. It was expected that the spontaneous development of the financial use of the ECU by private agents could correct in part the dollar "bypass effect", and, in a sense, repatriate within a European frame the savings-investment process. The expansion of a market for international ECU-denominated bonds was a key factor in this strategy.

## 4.2. The mixed performances of the ECU on bond markets

On general grounds, risk management and cost of borrowing/return on investment factors explain the choice of the currency of denomination of bonds. By pooling national currencies with different interest and risk characteristics, currency baskets are appealing to both investors and borrowers. They offer to investors "one stop" or "pre-packaged" diversification advantages, and thus they bring protection against foreign exchange risk, and they reward (or cost, on the borrower side) interest rates that are a weighted average of interest rates of constituent currencies. ECUdenominated claims and debts showed these mixed features of a fair compromise between risk and return (or cost) expectations <sup>10</sup>. In spite of these intrinsic qualities, however, the overall assessment on the development of the market for ECU bonds is rather mixed. The fist ECU bond issuance took place in April 1981. The share of the ECU in international bond issues rose steadily from 1982 to 1991 (See Table 6). With the 1992-1993 EMS crisis, ECU issuances collapsed and the ECU sector recovered only in 1998, after European leaders decided that the basket would become the euro 11, thus allowing for ECU-denominated bonds to be turned into eurodenominated bonds on a one-per-one basis.

<sup>&</sup>lt;sup>10</sup> Dammers and McCauley (2006), point that retail investors were probably more sensitive than institutional investors to this diversification advantage of the ECU.

<sup>&</sup>lt;sup>11</sup> *Ibid.* 

Table 4 The ECU on international bond markets – 1982–1992

	Total	ECU issues	ECU issues
	issues*	% of total issues	% of total issues
1982	71.7	1.26	3.26
1983	72.1	2.36	5.15
1984	108.1	2.59	7.05
1985	163.6	4.40	11.08
1986	147.4	3.87	7.12
1987	121.3	5.94	7.87
1988	161.3	6.70	9.47
1989	150.1	7.79	12.24
1990	166.2	9.09	13.25
1991	256.2	11.79	16.67
1992	275.3	6.76	10.08

Source: BIS Annual Reports

Note: 1982-1985: all categories of issues; 1986-1992: straight fixed rate issues only - In billions of US dollars

Many reasons help to understand why only a limited part of the market shifted from major international currencies to the ECU.

Besides the intrinsic diversification advantage embedded in the ECU, various factors can explain the relative success of ECU-denominated bonds during the 1980s. These bonds were linked to an official unit of account and profited by the stabilizing effect of the European exchange rate policy (but the downside was that ECU-denominated bonds also suffered from the failures of the exchange rate policy: as already noted, the 1992–1993 EMS crisis struck a severe blow to the ECU market by casting doubts on the viability of monetary cooperation in Europe).

The stability of the value of the ECU against the Deutsche mark (DM) also supported the market: ECU could appear nearly "as good as the DM" to international investors; the yield on ECU bonds was higher than on DM<sup>12</sup>. As Dammers and McCauley put it, "much demand for ECU bonds reflected a search for yield on the presumption of currency stability" <sup>13</sup>. ECU-denominated bonds seemed attractive as alternatives to dollar-denominated bonds in periods of dollar weakness. The ECU profited by the strength of the Deutsche mark, all the more as the issuance of DM-denominated bonds was discouraged by the German regulation (see below).

Regulatory factors also stimulated the interest for the ECU. This can be illustrated in two ways:

<sup>&</sup>lt;sup>12</sup> Theoretically, the ECU interest rate was the weighted average of constituent currencies rates.

<sup>&</sup>lt;sup>13</sup> Dammers and McCauley, p. 86.

1/ some countries took regulatory decisions that were aiming at favoring the financial use of the ECU. France, for instance, experienced a period of tight capital controls in the early 80s (until almost all capital controls were removed in 1986). During this period, all forms of French Franc denominated lending to non residents were prohibited. In order to favor the development of the ECU market, French authorities decided that the portion of French Franc included in any ECU-denominated lending to non residents would escape the prohibition. Similarly, French authorities recognized in May 1982 the ECU as a foreign currency, following decisions that had already been taken in Belgium-Luxemburg and Italy. Such decisions were taken by countries that were at that time the strongest supporters of the private development of the ECU, and their concern (France, Italy) was to avoid that strict national regulations regarding the use of their own currency by non-residents could impede the international use of the ECU.

2/ German restrictions on the international use of the Deutsche mark exerted also a positive but unintentional effect on the development of the private ECU market. Germany was the only EEC country to refuse to give the statute of a foreign currency to the ECU, and strongly opposed to any use of the ECU by German residents. Dammers and McCauley (2006) argue that official restrictions on the use of the Deutsche mark to denominate bonds for non-residents did a lot for boosting ECU-denominated issuances: this was especially the case during episodes of weakness of the dollar (late 1980s) when investor demand swung away from the dollar to the DM and to the ECU that served (on bond markets) as a proxy for the DM.

As a result, part of the surge of the ECU bond market came artificially from discrepancies in national regulatory constraints. The ECU bond market could also have suffered from its low liquidity: retail investors buying such bonds for diversification purposes generally did not want to trade them on the secondary market, and institutional investors, who are major participants in secondary markets, had a lesser need of the ECU to achieve portofolio diversification<sup>14</sup>.

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This overview of the use of the ECU as an investing currency points to the limited role it has played on international bond markets. Only a limited portion of savings was redirected to investment through the ECU denomination of bonds. This was not sufficient to create a large scale European market for capital. Looking back to the European economy over the last 20 years, one must admit that two factors did much more than the ECU for enhancing the degree of financial integration in Europe: the implementation of the Single Market, and the launching of the single European currency.

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<sup>&</sup>lt;sup>14</sup> Expectations of changes in the composition of the basket did not exert a negative impact on the market. The official definition of the ECU changed only twice between 1979 and 1999. These changes allowed for the introduction of currencies of new EEC members and for an overall adjustment of currency weights. They were managed in a way that did not change the external value of the ECU against other currencies, in order to guarantee the time consistency of the basket to its private users.

By putting a strong emphasis on the removal of all remaining capital controls within the European Union, the Single Market Act (1986, implemented from 1992 onward) played a decisive influence in the integration of capital markets in Europe. The Single Market Act provided for the harmonization of banking and financial regulations, and increased the competition within the financial service industry in Europe. This abolishment of financial protectionism favored an impressive convergence of all bond yields towards the German level (Figure 1). The convergence of yields of bonds denominated in various national currencies sped up in 1997–1998, when it became certain that the euro would replace these currencies by January, 1, 1999. Prospects about the nascent euro also entailed a revival of ECU issuances.

The replacement of national currencies by the euro gave a decisive impetus to the European bond market (Figure 2). With the advent of the single currency in 1999, all outstanding bonds denominated in currencies joining the European Monetary Union (as well as ECU-denominated bonds) were redenominated in euro. The European capital market received its most critical impulse from the standardization of currency denomination of assets and of interest rates which the single currency could achieve.

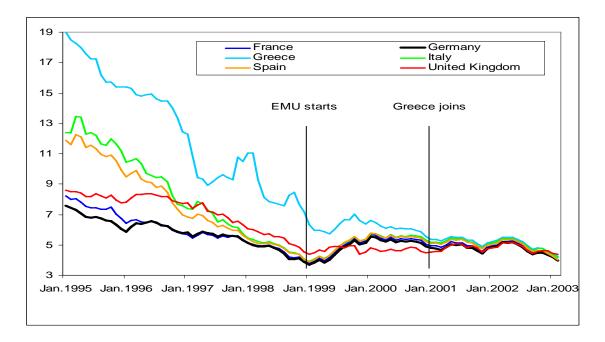


Figure 1 Interest rates on long-term government bonds (Jan.1995-Feb. 2003)

Source: Baldwin and Wyplosz (2004), p. 411.

When thinking over the ACU prospects, one should keep in mind the lessons from the ECU history: financial integration could make headway in Europe thanks to institutional reforms (the provisions of the Single Act for the banking and finance industry) and thanks to the advent of the single currency. The ECU took only a little

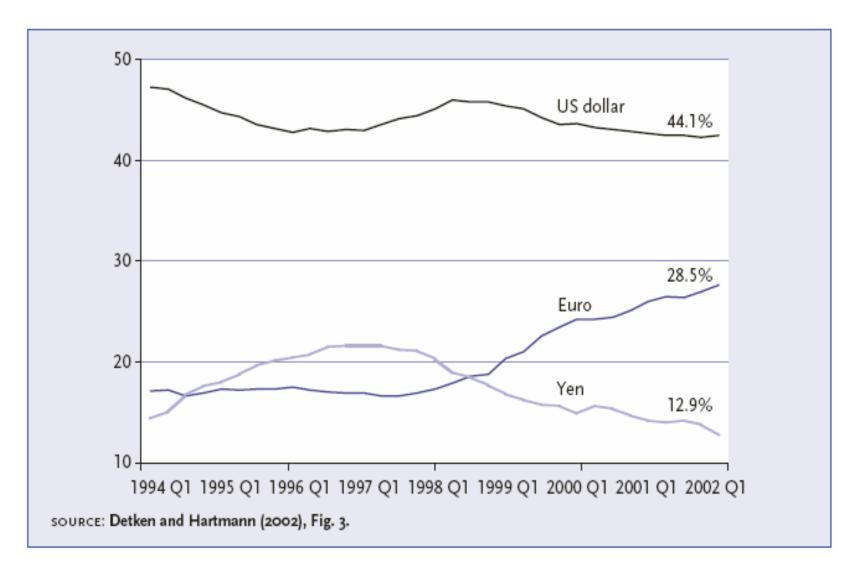


Figure 3 Currency Shares of International Bonds

part of it, probably because as an additional denomination currency of bond issuances, it was competing with some of its constituent currencies (Deutsche mark, sterling pound) on the international bond market. An ACU could face the same difficulty, with the risk that ACU-bond issuances could divert issuance away from national markets (Dammers and McCauley, 2006). Lastly, in the absence of a long-term perspective toward a single regional currency and from a ECU-based perspective, it is unlikely that the ACU could thrive on East Asian capital markets. This is the point we address in the last section.

# 5. Which lessons for Asia? On the importance of the political commitment

When countries contemplate the making of a regional currency basket, technical discussions (how to determine the weighting of each constituent currency) do not come in the first place <sup>15</sup>. The very first question is about the list of national currencies to include into the regional currency basket. Choices may be governed together by economic reasons and political reasons, as shown by the European example. The same holds true for the ACU: discussing the composition of the basket needs that economic and political mobiles be dissociated.

#### Economic criteria

From an economic point of view, a regional currency unit should support the interests of East Asian economies at the regional and global level (Williamson, 2005; Ogawa, 2001). If the goal is to facilitate the stabilization of trade balances and capital flows in East Asia, a currency basket peg system could prove to be an interesting solution. It could be so on condition that the basket includes an adequate weight of the US dollar, due to the important linkages of East Asian countries to the dollar area. The growing trade flows between East Asia and Europe could also lead to recommend the inclusion of the euro in a currency basket designed for exchange rate monitoring and stabilization purposes. East Asian countries' external trade patterns could drive the discussion toward the possible inclusion of other non-Asian currencies, such as the Australian dollar. There are, in brief, many economic arguments from which the composition of a currency basket dedicated to the East Asian area could differ from the list of ASEAN + 3 currencies.

If we limit the discussion to ASEAN + 3 currencies only, then on purely economic grounds a reasonable and wise first round composition of the ACU could be to include the currencies of the most financially developed countries: this is what is proposed by Shimizu and Ogawa (2006) in their definition of a "core Asian monetary unit" (AMU) for denominating regional bonds. According to these authors, two conditions should be met for belonging to this core unit: the credit rating of local currency sovereign bond should be similar among core-AMU candidate currencies, and these currencies should be convertible in both current and capital accounts. The authors' calculations show that six ASEAN + 3 currencies meet these criteria: the Japanese yen, the Hong Kong dollar, the South Korean won, the Singapore dollar, the

<sup>&</sup>lt;sup>15</sup> We do not deal here with currency baskets that some countries use as unilateral pegs for their national currency.

Thai baht and the Indonesian rupee. We understand that such a composition is a tentative compromise between political requirements (only ASEAN + 3 currencies are considered <sup>16</sup>) and economic conditions (only hard or semi-hard ASEAN + 3 currencies fulfil the economic criteria and are proposed for entering the regional currency unit composition).

## Political criteria

A predominantly political approach to the definition of a regional currency unit would be to draw its composition from the list of countries sharing a common vision of their future and willing to achieve their ends by teaming up in some kind of regional economic entity. The question about the regional currency unit composition received a quite simple answer in Europe, as countries had already teamed up in a regional institution (the European Economic Community) before the ECU was launched. Politics had been (and still has been) the driving force of the European construction since its inception: obviously, it was unquestionable that each currency of EEC members had to be included in the basket. When the EUA (then renamed ECU) was launched, in 1975, it was made of all the national currencies of countries belonging to the EEC at that time, without any discussion about their status of hard or weak currency. When additional countries joined the Community (Greece in 1981, Portugal and Spain in 1986, ....) the composition of the ECU was revised accordingly. Being (or becoming) one of the member countries of the EEC entailed automatically the inclusion of the corresponding national currency in the ECU.

Interestingly, when working on an ACU made of the currencies of the 13 members of the ASEAN + 3 group, the Asian Development Bank is validating the importance of the political view in the design of a regional currency, as these countries have advanced the most in terms of trade cooperation. But contrary to Europe, there is no political long-term vision in East Asia, and the nature, the scope and the timing of institutional integration still remain vague. This is probably why there has not been so far any consensus among Asian leaders on which currencies should be included in a regional currency unit: under the agreement that was reached in May 2006, they plan to study various types of units made up with different baskets of currencies. Anyhow, the composition of the ACU on an ASEAN + 3 basis is questioned by some non-ASEAN + 3 countries. The National Bank of Taiwan expressed concern over the possible exclusion of the New Taiwan dollar from the eventual composition of the ACU. Similarly, some voices are advocating against the exclusion of the currencies of Hong Kong, Australia and New Zealand from the ongoing talks, but these assumptions are strongly contested by China and the ASEAN states. Also, India is not invited in the present round of talks, which raises criticism in India.

#### Did the ECU pave the way to the euro?

It is often suggested that the ACU could pave the way to a future single Asian currency. This obviously draws on the European example that the ACU could follow the steps of the ECU with a "unit of account, then parallel currency, then single

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<sup>&</sup>lt;sup>16</sup> We keep in mind here the particular position of the Hong Kong dollar.

currency" sequencing. But the ECU story tells us a last thing: the ECU played only a limited role in the advent of the euro.

## 1/ The parallel currency was a dead end road

In the mid 80s an optimistic (and proselyte) view was that the advent of a genuine European single currency could come out of the private use of the ECU. This was grounded on the belief that "choosing the ECU" for denominating and even settling commercial or financial private transactions was a sign of confidence in the European monetary integration process, and that it could enhance and hasten the coming of the single currency.

We know from the statistics that "choosing the ECU" was not an irresistible trend, far from it. The "market share" of the ECU did not grow significantly in the currency distribution of trade invoicing or even in the currency-denomination of financial assets (see *supra* 4.). As a market-driven process, the private use of the ECU was by no means decisive in promoting a genuine regional currency. We do not believe that the ACU could do better than the ECU did. We doubt that any (still hypothetical) private use of the ACU could prop the (still hypothetical too) creation of a single currency in East Asia. From the ECU example, we disagree with the idea that in East Asia "the decision to move to a single currency could be driven by economics rather than by politics" (Eichengreen, 2006) and doubt the parallel currency could pass the "market test". Rather, we would like to point that the relative success of the ECU, if any, was more politically than market-driven.

## 2/ The euro did not grew out of the ECU, but rather supported its development

The private ECU drew most of its limited success from the fact that it was linked to the long term goal of European monetary unification. We believe that, besides the intrinsic advantages they could draw from the currency basket nature of the ECU, private users of the ECU took an interest in it because it had an official definition, and it was part of a broader plan, that is, it was bound to be transformed some day into a single currency. The backbone of the ECU strength came from official prospects about the setting of a single currency in Europe. In a sense, the ECU was a barometer of expectations about the future of the European monetary project and the implementation of the single currency. When the EMS went into a difficult period, in 1992–1993, doubts about the future of European monetary unification exerted a negative impact on the ECU bond market. In the opposite direction, this market experienced a revival in 1998 when the launching of the euro became certain.

The most important difference between the ACU and the ECU must be emphasized: when the ECU was launched, European countries were already officially heading for a single currency. But on the eve of possibly launching an ACU, East Asia is not. The concept of a single currency for Europe appeared in a document dating back to 1956 (known as the "Spaak-Uri" report). The Rome Treaty (1957) did not mention the establishment of a single currency in Europe as a goal to pursue. The very first official mention came soon after, in a document called Memorandum of 1962 (the Marjolin report, defining the monetary union as the third stage of unification, in the

end of a long way requiring progress toward the political union). In 1970, the Werner report envisioned the conclusion of full economic and monetary union within ten years. The political decision to settle the monetary union in Europe came in 1992 only (Maastricht Treaty) after having been in the making for some thirty years. All the monetary decisions taken by European leaders during this preliminary period – among which is the creation of the ECU – are given their full meaning in the light of what they were preparing: the advent of a single currency. In that sense, the monetary history of Europe perfectly illustrates the vision that "the future explains the present"<sup>17</sup>.

As a part of the plan toward the single currency, the ECU benefited from the strongest possible political commitment. Its major winning card was to foreshadow the euro. In that sense, the true statement would be that the euro paved the way to the ECU rather than the opposite. But the lesson is that, in spite of its major chance as an official creation, the ECU did not succeed much out of the official sphere, and did not have any significant effect on economic integration in Europe. From this experience, one may be skeptical about the prospects of the ACU: without any official commitment of participating countries to some kind of institutional grouping at the regional scale, and without the driving force of a single currency to be reached at the end of the road, how could the ACU be more than an index, or purely conceptual unit of account?

#### 6. Conclusion

Regional economic cooperation in East Asia has been a widely discussed topic since the 1997-1998 Asian crisis. Discussions among East Asian leaders have focused so far mostly on monetary and financial aspects, with the tangible outcomes of the Chiang Mai Initiative and the Asian Bond Initiative. Longer-term visions are sometimes expressed on the desirability and the feasibility of an economic and monetary union in East Asia. In these discussions, the European example exerts a powerful attraction. A recent initiative is a proposed index of regional currencies, which is now being referred to as the "Asian Currency Unit" (ACU). The ACU, which is being designed under the patronage of the Asian Development Bank, is modelled on the European Currency Unit (ECU) which was the forerunner of the euro. It is often thought that the primary purpose of this currency basket would be to facilitate the development of an Asian multi-currency bond market. This question is echoing a thirty-year's old debate about the possible role of the ECU in favouring the development of capital markets in Europe. We have tried in this paper to look back to the ECU period (1975-1999) in order to draw possible lessons for assessing the potential of the ACU as a financial integration enhancing device.

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<sup>&</sup>lt;sup>17</sup> Whereas historians believe that the past can explain the present, future studies rely on the vision that the future can explain the present. This statement makes sense if we understand the "future" as the projects that individuals or groups of individuals elaborate for their future. Knowing what people or nations want for their future helps a lot for understanding the way they behave today: this "desired future" explains the present.

In the early 1980s, private uses of the ECU started to develop, especially for borrowing and investing purposes. This raised hopes that the ECU denomination would permit to channel more of Europe's savings to investment opportunities within the region, and thus, to strengthen financial integration in Europe. The European experience teaches that the ECU played only a limited part in that respect: the share of ECU-denominated bonds did not rise much over 15 per cent of all non-dollar Eurobonds, and ECU-denominated claims reached only 10 per cent of the non-dollar foreign currency claims of banks. The move toward an integrated Europe-wide financial market had to wait until the 1990s and the provisions of the Single Act regarding the banking and financial industry. Above all, a decisive role was played by the launching of the euro: since 1999, an impressive convergence of bond yields on domestic financial markets has been observed, showing that European integration of capital markets is on the way. The European Union demonstrates the importance of a single currency in promoting regional market integration. It is worth having in mind the European experience of the use of a currency basket on capital markets when discussing the present issues and prospects of the ACU.

From the experience of the ECU on financial markets, one may be only but sceptical about the chances of the ACU in promoting financial integration in East Asia. In spite of its official status and of its assigned role in the program toward a monetary union, the ECU did not have any significant effect on economic integration in Europe. The ACU has not even benefited so far from a comparable official support. This is an additional reason for avoiding setting too many hopes in it. However, it seems reasonable to conclude that, although the ACU will not by itself be sufficient to enhance financial integration in East Asia, it could add to policy initiatives aiming specifically at developing capital markets in the region.

## References

Asian Bond Monitor (2005), "Monitoring financial integration in East Asia", Nov., 14-32.

Baldwin R. and C. Wyplosz (2004), The economics of European integration, Maidenhead: McGraw-Hill Education.

Bank for International Settlements (2006), "Asian bond markets: issues and prospects", BIS Papers, 30, November.

Chai, H.-Y. and Y. Rhee (2005), "Financial integration and financial efficiency in East Asia", mimeo.

Cowen, D., R. Salgado, H. Shah, L. Teo and A. Zanello (2006), "Financial integration in Asia: recent developments and next steps", IMF Working Paper WP/06/196.

Dammers, C. and R. McCauley (2006), "Basket weaving: the euromarket experience with basket currency bonds", BIS Quarterly Review, March.

Detken, C. and P. Hartmann (2002), "Features of the euro's role in international financial markets", Economic Policy, 35, 555–569.

European Economy (1983), Stament of the European Commission, Nov.

Eichengreen, B. and Y. C. Park (2003), "Why has there been less financial integration in Asia than in Europe?", Institute of European Studies, Paper pei f'4. Revised version published in Y. C., Park T. Ito and Y. Wang (eds), (2005), A new financial market structure for east Asia, Aldershot, UK and Brookfield, US: Edward Elgar.

Ito, T. and Y.-C. Park (eds) (2004), Developing Asian Bond Markets: Challenges and Strategies, Canberra, Australia: Australian National University Asia Pacific Press.

Iwata, K. (2005), "Formation of regional financial and currency area: some lessons from Europe to Asia", paper presented at the 3<sup>rd</sup> Conference of EUSA-AP, Keio University, 10 December 2005.

Levine, R. (1997), "Financial development and economic growth: views and agenda", Journal of economic literature, 35, 688-726.

Ogawa, E. (2001), "Monetary integration in East Asia", The Journal of East Asian Affairs, 15, 2, 344-368.

Ogawa, E. and J. Shimizu (2004), "Bond issuers' trade-off for common currency basket denominated bonds in East Asia", Journal of Asian Economics, 15, 719-738.

Ogawa, E. and J. Shimizu (2005) "A deviation measurement for coordinated exchange rate policies in East Asia," RIETI Discussion Paper Series 05-E-017.

Ruffini, P.-B. (1986), "Fonder sur l'Ecu l'espace financier européen", in M. Aglietta (Ed.), L'écu et la vieille dame - Un levier pour l'Europe, pp 95-119.

Ruffini, P.-B. (1989, a), "Développement et limites de l'écu privé", Revue d'économie financière, 8 - 9, 81-103.

Ruffini, P.-B. (1989, b), "L'Ecu dans les transactions commerciales: les raisons d'un essor limité", De Pecunia, 1, 1, June, 92-100.

Shimizu, J. and E. Ogawa (2006), "The core-AMU denominated Asian bonds for local investors n East Asia", Paper presented at the APEA Conference, University of Washington, Seattle, July 29-30, 2006, available on line at: http://www.apeaweb.org/confer/sea06/sea06-papers.htm

Williamson, J. (2005), "A currency basket for East Asia, not just China", Policy Briefs in International Economics, N° PB05-1, 1-13.

Xiao, F. and D. Kimball (2006), "Effectiveness and effects of China's capital controls", paper presented at the APEA Conference on University of Washington, Seattle, USA, July 29-30, 2006.