Internationalisation of currency in East Asia: implications for regional monetary and financial cooperation[1]

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1. Introduction

A number of East Asian economies including China have been exploring the possibility of internationalising their currencies in recent years. Although widely used in the economics literature, terms such as international currency and internationalised currency are not well defined. As a first approximation, it could be argued that full convertibility covering both current and capital account transactions would qualify a currency as a global medium of exchange, unit of account, and store of value.

In East Asia, there are several fully convertible currencies such as the yen, the Hong Kong dollar, the Singapore dollar and other regional currencies of varying degrees of convertibility. But even the Japanese yen, not to mention other convertible currencies, remains a distant third key international currency, although Japan is the second largest economy in the world and has taken steps to reform its policy and institutions in order to facilitate internationalisation of the yen since the late 1990s. If Japan's experiences are any guide, one wonders why small emerging economies would entertain the idea of making their currencies international. Yet, encouraged by the successful internationalisation of the Australian dollar, several East Asian economies are attempting to replicate a similar experience.

With regard to China, a case could be made for elevating the status of the renminbi commensurate with its growing economic clout in the global economy. For other emerging economies, their motives are not clear, but the intensification of competition to host a regional financial centre in East Asia may have spurred them to consider pursuing internationalisation. The purpose of this paper is to delineate some of the issues related to currency internationalisation in East Asia.

More specifically, this paper will define currency internationalisation, that is, identify some of the qualifications for currency internationalisation, such as capital account liberalisation, in Section 2. In Section 3, the benefits and costs of currency internationalisation are analysed, and its effects, particularly those of capital account liberalisation, are described in Section 4. Section 5 provides an examination of the implications of currency internationalisation in East Asia for monetary and financial integration led by the ASEAN+3 countries. The concluding remarks are presented in the final section.

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2. Prerequisites or qualifications for an international currency

A national currency may, in general, be regarded as "internationalised" if it plays a role of money outside the country where it is issued. An international currency is used in invoicing exports and imports of goods and services and in denominating financial instruments traded in global financial markets. Obviously, this is not a workable definition. For an operational definition, it may be useful to identify the qualifications for an international currency.

In general, money has three primary functions: as a medium of exchange, as a unit of account, and as a store of value. Of these, its function as a medium of exchange is the feature that distinguishes money from other financial assets. In most cases, these three functions of money are restricted to the country where it is issued. Internationalised money therefore refers to one that performs these functions outside the country of its issuance, in particular as an international medium of exchange. In order for money to be internationally used for the settlement of international transactions, one of the necessary conditions is that there are little or no restrictions on foreigners' access to domestic financial markets. Other conditions or qualifications, which are mainly associated with market fundamentals, also need to be satisfied for it to be actually used by foreigners.

In this regard, it is important to distinguish between capital account convertibility and currency internationalisation. Capital account convertibility is certainly one of the preconditions, but it does not automatically make a local currency an international medium of exchange. It implies that there is no barrier to cross-border financial transactions conducted at market-determined exchange rates. Under certain circumstances, currency internationalisation could be achieved without complete capital account convertibility. For example, some restrictions on domestic investors' investments in foreign assets could be retained in countries with an internationalised currency (Kenen (2009)).

Other qualifications for an international currency may be gleaned from the features of the existing key international currencies such as the US dollar and the euro, which serve as both a global medium for transactions and are held as part of foreign exchange reserves. The two currencies play dominant roles as reserve and trade currencies. Together, they accounted for 50–70% of the denomination of exports and imports of goods and services, even for a third country such as Japan or Australia (Table 1), 90% of international reserves held by the world's central banks (Table 2), and 80% of the denomination of international financial instruments (Table 3), although the shares of the US dollar and the euro in global GDP amounted to 25.8% and 30.4%, respectively. The two key currencies are fully convertible because they are widely used in the settlement of international transactions of goods and services and financial instruments. Both the US dollar and the euro are independently floating, but internationalisation of a currency is not necessarily predicated on the type of foreign exchange rate regime. In fact, as the Hong Kong SAR case illustrates, it appears that different exchange rate regimes are compatible with international currencies, although a variety of intermediate regimes may run into conflict with internationalisation as they often entail capital controls.

The two key currencies share some economic features which are essential for the internationalisation of a currency. First, the volume of trade in goods, services and financial assets originating in the issuing economy is large and, second, the issuer has the bargaining power to denominate trade in its own currency. These qualifications then suggest that developed countries would have a better chance of internationalising their currencies because they tend to produce more differentiated goods, thereby giving a greater market power to the producers. A well developed financial market with a large variety of risk hedging instruments is also advantageous for currency internationalisation. Finally, an international currency should be able to gain the confidence of other countries in its value if it is to be successfully used as a store of value. In this regard, it is important that the reserve currency country has a good track record of price stability.

National currencies may be fully convertible and freely floating, but unless they are widely used in international transactions they do not function as a global unit of exchange. This means that, above all, the degree of a currency's actual usage is the most critical criterion for qualifying it as an international currency. The extent of internationalisation of a currency is often measured by its share in the denomination of international trade in goods, services and financial assets, and its holding of foreign exchange reserves. When this measure is applied, even the Japanese yen does not qualify as a fully fledged international currency (Tables 1–3).

In order to illustrate the underlying market forces that facilitate the internationalisation of a currency, this section reviews the literature on how the choice of an invoicing currency is determined. A general feature of currency internationalisation is that traded goods and services are likely to be invoiced in the exporter's currency, enabling the exporters to avoid the exchange rate risk. While importing firms also prefer to invoice in their own currency, imports tend to constitute a lower proportion of their spending than exporters' sales are for exporting firms' revenue (Page (1977)). Importers can also adjust to exchange rate fluctuations by changing the domestic prices of their products, whereas exporters cannot easily do so as a large portion of their costs – such as labour costs – are usually fixed in exporters' currencies (Krugman (1984)). Additionally, the bargaining power of exporting firms is likely to be greater, as they enjoy either the first-mover advantage or the monopoly power (McKinnon (1979), Viaene and de Vries (1992)). All these considerations point to the dominance of the exporter's currency, ie producer currency pricing (PCP), in trade among developed countries. On the empirical front, Grassman (1976), among others, found that, on the basis of the Swedish data, traded goods and services were more frequently invoiced in the exporter's currency. This is also confirmed by Table 1: for example, in 2005, while 38% of Japan's exports were denominated in the yen, only 23.1% of its imports were yen-denominated.

The choice is also influenced by the product structure of trade. For example, PCP is more likely to prevail if traded goods and services are more differentiated (Tavlas (1996)). This is because exporting firms face demand uncertainty. If the exporter's currency is used as an invoice currency, importers face changes in payment prices as the exchange rate fluctuates, to which they respond by changing their demand. Preference for PCP would then depend on the relative size of the two risks: the exchange rate risk and the demand uncertainty. The degree of the demand uncertainty crucially hinges on the competitiveness of the market: the more competitive the market, the higher the demand uncertainty, as importers have greater room to switch between exporters (McKinnon (1979)). If an exporter enjoys monopoly power, changes in the price of its product will result in lower fluctuations in demand. In an extreme case, if the demand curve is vertical, changes in the product price will not affect the demand at all. Therefore, if exporters produce more differentiated goods, they are subject to reduced demand uncertainty, hence their preference to fix the price, ie by choosing PCP.[4] Many studies have found that, in trade between a developed and a less developed country, the former's currency is more likely to be used as an invoice currency. This finding is consistent with the fact that developed countries produce and export relatively more differentiated goods and services, reducing their exposure to demand uncertainty.[5] The dominance of a developed country's currency in trade invoicing can also be attributed to lower valuation losses associated with the stability of developed countries (Magee and Rao (1980)).

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[4] There is also a growing trend towards using the importer's currency for invoicing trade or relying more on local currency pricing (LCP). Invoicing in the importer's currency can enable exporters to minimise the demand uncertainty arising from the increased market competitiveness caused by the globalisation of the world economy.

[5] Developed countries produce more differentiated goods and services with monopoly power because they employ more advanced production technologies.

Finally, more homogeneous goods such as oil and other primary commodities are likely to be invoiced in very few key currencies. If they are invoiced in several exporters' or importers' currencies, arbitrage opportunities open up widely across different currencies due to fluctuations in the exchange rates. In order to eliminate such opportunities, the goods are likely to be invoiced in the same vehicle currency (McKinnon (1979)). Furthermore, it is easier to compare prices if they are quoted in the same vehicle currency on organised exchanges (Goldberg and Tille (2008)).

3. The benefits and costs of currency internationalisation

The preceding discussion suggests that the global economy may not be able to accommodate a large number of key international currencies. This is especially so as the idea of network externalities, ie whereby the value of a good or service to a user depends on how many others use it as well, also applies to currency usage. If network externalities prevail, a particular currency is more likely to dominate internationally as there are strong incentives for others to conform to the choice of the marketplace.[6] Why, then, would small emerging economies consider currency internationalisation, particularly if they have to endure the pains and costs of the extensive structural and institutional reforms dictated by internationalisation? Obviously, there are benefits to having an international currency. But there must also be costs.

3.1 The benefits of currency internationalisation

The first benefit of currency internationalisation is that domestic agents engaged in foreign trade may be able to reduce foreign exchange rate risk to the extent that their exports and imports are invoiced in their own currencies. Domestic borrowers (financial institutions and firms) could also borrow in their own currencies, thereby avoiding a currency mismatch in their balance sheets. The 1997–98 Asian financial crisis clearly demonstrated that macroeconomic shocks could be amplified by balance sheet aggravation in the banking sector.[7] It has been argued that, owing to the development of derivative products, such benefit – of reducing foreign exchange risk – is now lower than in the past. However, the recent exchange rate risk management of shipbuilders in Korea shows that there is a limit to which the risk can be hedged through the use of derivatives instruments as it could engender a system risk for the economy as a whole. Since it takes a long period of time to construct ships, a typical shipbuilding order designates the delivery of payment, mostly in US dollars, at a future date, often more than a year later. In order to avoid the exchange rate risk, shipbuilding companies usually take a short position in the forward market. Banks are usually the counterparty of the forward market: they take a long position while at the same time borrowing the same amount of US dollars of the same maturity so as to square their foreign currency position. This arrangement could trigger a liquidity crunch if some of the shipbuilding orders are not fulfilled because the ship buyers are unable to pay. On the delivery date, shipbuilding companies are then forced to purchase US dollars in the spot market to clear the position. This increase in the demand for US dollars leads to a sharp

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[6] A counterargument against network externality, raised by Eichengreen (2005), is that competition for the affections of investors, particularly for a reserve currency, may act in favour of multiple international currencies.

[7] In order to mitigate the currency mismatch problem, financial regulatory authorities in East Asia imposed a number or restrictions on asset and liability management involving foreign currency borrowing and lending after the 1997–98 financial crisis. They have not been very effective in guarding against the incidence of currency mismatching (Park (2009)).

depreciation of the local currency, a deterioration of the shipbuilders' balance sheets and a piling-up of losses incurred by the shipbuilders. The preceding example shows that the potential benefit could be great if currency internationalisation is able to mitigate the currency mismatch.

Second, countries with major international currencies also reap the benefits of collecting seigniorage revenues from foreign holdings of their currencies. Recently, Chinn and Frankel (2007), by using shares of the reserve holdings of the world's central banks as a proxy for foreign holdings of internationalised currencies, found that the shares are determined by the economic size of the country, the inflation rate, the exchange rate variability, and the size of the relevant financial centre (as measured by the turnover in its foreign exchange market). Furthermore, they found that the relationship between currency shares and their determinants is not linear, which supports network externality theories. As far as emerging economies are concerned, since they are less advanced in terms of those determinants, such benefit is likely to be insignificant.

Third, domestic financial institutions may gain an edge over their external competitors in dealing in their own currency. It is anticipated that, once a number of financial assets denominated in their own currencies are issued and freely exchanged for foreign currencies, more opportunities in global financial intermediation will open up for domestic financial institutions. For this reason, some policymakers consider currency utilisation as a way of developing financial institutions.[8]

Finally, some emerging economies may find it necessary to internationalise their currencies in order to successfully construct a regional financial centre on their soil. For example, Korea has been pursuing currency internationalisation in the expectation of hosting an international financial hub. This strategy may work, but currency internationalisation does not necessarily lead to the establishment of a financial centre within the boundaries of the issuance country. For instance, in the case of the euro, a fully developed international financial centre is located neither in Frankfurt nor in Paris. Instead, London deals with a large share of cross-border financial transactions in euros.

Singapore's well known non-internationalisation policy also illustrates the fact that currency internationalisation is not a necessary condition for the development of a financial centre. Since the late 1960s, the Singapore government has provided special regulatory and tax treatment for foreign commercial banks to promote offshore foreign currency deposits. Singapore also eliminated all barriers to bona fide capital account transactions and raised the institutional environment to international best practices. Such policy reforms have contributed to the establishment of the Asian dollar market (ADM) along the lines of the eurodollar market. The Singapore government, however, perceived the size of the Singapore economy to be too small compared to the rapidly growing volume of foreign currency deposits. Since Singapore used the exchange rate as a benchmark policy instrument, its government was especially concerned about the possibility of speculative attacks on the Singapore dollar. It believed that restricting the international use of the domestic currency could essentially protect the Singapore dollar from speculative attacks (Chow (2008)).

The key feature of the non-internationalisation policy adopted by the Singapore government was restricting asset side banking transactions of cross-border lending of Singapore dollars to non-residents or to residents where Singapore dollars were to be used outside Singapore. This non-internationalisation policy continued until the late 1990s and since then, the policy has been liberalised in stages. The only remaining legacy of the non-internationalisation policy is the prohibition of extending Singapore dollar credit facilities to speculative activities,

[8] See, for example, IMF (2006), for an illustration of the aims of won internationalisation pursued by Korea's policymakers as a way of financial sector development and expansion of cross-border financial transactions.

and restrictions on outflows of Singapore dollar accounts above a certain level (IMF (2001)). It is not clear whether the non-internationalisation policy was effectively performed in the past to prevent speculative attacks on the currency because the risk of speculative attacks has not substantially increased since the Singapore government successfully removed most of the restrictions related to the non-internationalisation policy.

3.2 The costs of currency internationalisation

Emerging economies embarking on currency internationalisation must be prepared to bear the costs of allowing their currencies to be freely traded in foreign exchange markets. First of all, they need to lift restrictions on capital account transactions and also deregulate the domestic financial system. In view of the fact that all advanced economies have a fully liberalised capital account, emerging market economies also need to manage capital account liberalisation, at least in a gradual manner over time. If capital account liberalisation has almost been attained, it would be important to isolate the marginal benefits and costs of currency internationalisation in addition to those already attained by capital account liberalisation. In that case, the additional benefits and costs associated with currency internationalisation may not be large. However, if capital account liberalisation has not been attained, the benefits and costs of currency internationalisation, as they include those of capital account liberalisation, could be substantial. In theory, capital account liberalisation could provide substantial benefits because it enhances the efficiency of capital reallocation, deepens capital markets and creates more opportunities to smooth consumption over time and share consumption risk. However, recent empirical studies have not found any discernible benefits of capital account liberalisation: Kose et al (2006), among others, find little robust evidence of the growth benefits of capital account liberalisation. Instead, a number of studies point out the difficulty of managing macroeconomic policies in response to sharp capital flow reversals.

Second, since currency internationalisation predisposes the emergence of offshore currency markets, emerging economies may have to endure an increase in their exchange rate volatility. For example, the exchange rate would move in response to changes in the foreign demand for the domestic currency resulting from foreign shocks not associated with domestic economic conditions. However, the opposite could be the case: by enlarging the foreign exchange market, currency internationalisation could actually contribute to increased exchange rate stability. If the foreign exchange market becomes deeper, the exchange rate would not be significantly influenced by any single party's transaction. More diversified sources would stabilise the aggregate demand and supply of domestic currencies in the foreign exchange market. Whether currency internationalisation would lead to increased exchange rate volatility is therefore an empirical question.

Third, some emerging economies may become more vulnerable to the currency crisis if foreign investors widely hold domestic currency financial instruments. If foreign investors are hit by a liquidity squeeze, they may be forced to sell domestic currency assets, putting pressure on the exchange rate to depreciate. Since the depreciation of the exchange rate lowers the value of domestic assets, it reinforces the incentive to sell more, further contributing to depreciation. This is already a familiar story in Korea: following the onset of the subprime mortgage crisis, foreigners have liquidated a large share of their holdings of Korean stocks, lowering the foreign share from over 45% to 26%. Currency internationalisation can result in providing speculators with more instruments to be used in speculative attacks on the currency. For example, after foreign investors intentionally raise funds by issuing financial debts, or take a short position denominated in the domestic currency, they can sell the domestic currency in the foreign exchange market to drive the exchange rate down. If the exchange rate further depreciates, they can earn huge profits from the lowered value of the debt.

Finally, an additional source of money demand by foreigners may complicate the monetary authorities' management of monetary policy. For example, if the monetary authorities change the money supply without taking into consideration the external demand, they may not able to set the intended target level of money supply in the domestic economy. This was one of the most important concerns of the monetary authorities of both Germany and Japan when they made their decisions about internationalising their currencies (Frankel (1984), Talvas (1996)). One possible counterargument to this problem points out that monetary policy's main operating target is the interest rate, not the money stock, if inflation targeting is adopted as a framework of monetary policy operating procedures. In this framework, as long as the monetary authorities maintain the target interest rate, since the money stock is endogenously determined, the additional source of money demand may not create too many problems for the monetary authorities if they automatically adjust the money supply.

In fact, the difficulty of conducting autonomous or independent monetary policy is not due to currency internationalisation per se, but more generally to capital account liberalisation. Since Mundell's seminal paper (1963), it is well known that if the capital account is fully liberalised, it is impossible to preserve both autonomous monetary policy and exchange rate stability. Most emerging economies have chosen to preserve autonomous monetary policy over exchange rate stability by adopting free floating. There is still an issue over whether the floating exchange rate can be sustained or, even if it is, whether it actually guarantees a fully autonomous monetary policy.

When the benefits are balanced against the costs of internationalisation, it is not clear whether a strong case can be made for having an international currency in emerging economies. Why, then, are many of the emerging economies in East Asia attracted to the idea of currency internationalisation. The policy authorities of those countries have been managing inflation targeting as a framework of monetary policy since the 1999 Asian financial crisis. In general, inflation targeting presupposes the decontrol of capital account transactions and the adoption of free floating. And they may realise the inevitability of opening up their financial markets and intermediation industries to foreign competition in the not too distant future. At the same time, developing onshore international financial markets, which requires currency internationalisation, may help to garner greater public support for capital account liberalisation.

Although they are important prerequisites, currency convertibility on both the current and the capital account and free floating do not guarantee the internationalisation of a currency. In order to make a currency international, as noted above, the currency in question must be widely used internationally. Since all East Asian emerging economies, except for China, command a small share of global trade in goods and services, the most effective way of promoting an extensive international use of their currencies would be by playing a more important role in international financial intermediation. If this is indeed what they are striving for, the idea of hosting a regional financial centre with currency internationalisation may merit further discussion. In this respect, it should be emphasised that the East Asian emerging economies vying for a major role in East Asia's regional financial markets need to identify the structural and institutional reforms that must be carried out and set a timetable for their implementation.

4. The effects of capital account liberalisation on growth, stability and liquidity provision

As discussed in the preceding section, one of the necessary conditions for the internationalisation of an insular currency is the liberalisation of capital account transactions, that is, making it fully usable for the settlement of international transactions. In the financial regime of a country with an international currency, it is expected that the deregulation of

cross-border investments would provide a level playing field for both foreign and domestic market participants. In such a regime, foreign investors are not subject to any restrictions on buying and selling domestic financial instruments in both domestic and offshore markets. Foreign borrowers are also allowed to issue bonds and other financial instruments denominated in the domestic currency in both domestic and offshore markets and to market them to non-resident investors. Likewise, domestic residents are accorded the same opportunities to participate in foreign financial markets both as lenders and borrowers.

Capital account liberalisation is often the most difficult and, invariably, the last stage of financial market opening in emerging economies. Since its effects on the economy remain uncertain, emerging economies would need to weigh up the benefits and costs of capital account deregulation before embarking on currency internationalisation. There is a vast literature on the benefits and costs of financial market opening. This section briefly reviews its effects on economic growth, financial market stability, and reserve holdings for self-insurance in emerging markets as a first step towards assessing the rationale of currency internationalisation in East Asia's emerging economies.

4.1 Growth benefits

The standard argument with regard to economic growth is that financial globalisation leads to capital flows from advanced economies with low rates of return on capital to emerging and developing economies with higher returns, thereby complementing limited domestic savings and lowering the cost of capital to augment domestic investment in the latter. Certain types of capital inflows, such as foreign direct investment (FDI), bring with them new technologies and help to improve the managerial and organisational capacity of the host countries. The existing literature presents little robust evidence on the growth benefit of financial opening. Kose et al (2006) argue that there are certain threshold conditions that must be met by emerging economies in order to reap the growth benefits from financial market opening such as developed financial markets, high quality of institutions and governance, and trade integration. The authors warn that premature opening of the capital account in the absence of such supporting conditions could make emerging economies more vulnerable to external shocks, such as sudden stops of capital inflows.

At this stage, few East Asian emerging economies, excluding the five latecomers of ASEAN, are suffering from a lack of domestic saving. For more than a decade since the 1997–98 crisis, they have been exporting capital by running sizeable amounts of current account surpluses. Their concern has been the lack of investment demand. And the current trend is not likely to be reversed any time soon. For this reason, the policymakers of East Asian emerging economies are not likely to have the growth objective high on their agenda for currency internationalisation.

4.2 Financial stability

In contrast, however, there is mounting evidence that increasing capital account liberalisation has increased capital flow volatility, posing serious impediments to financial stability (Stiglitz (2002), Park (2006)). Since the start of the 2007 crisis, capital flows in many East Asian economies with fully and partially open capital accounts have become more unstable than before, causing a high degree of fluctuations in stock prices and exchange rates. Indeed, capital account liberalisation has presented serious challenges for stabilising domestic financial markets in emerging economies. This challenge has been compounded by the problem of size inconsistency.

To large foreign private and institutional investors operating out of East Asia's regional financial markets, their investments in an individual emerging economy often account for a very small share of their total global investments. But given the relatively small size of local financial markets, their investments in any country can be large, beyond its absorptive

capacity, and can therefore easily dictate movements of financial prices, including the exchange rate. When global financial markets are as unstable as they have been in recent years, global investors continuously reappraise the country risks of their investments and adjust their regional and country exposure. When they decide to reduce their regional exposure to, for example, East Asia, they often sell off their holdings of financial instruments of those countries without discriminating between economic fundamentals and credit ratings of different countries and securities. Their withdrawal from the region may comprise small adjustments of their portfolios, but it could have a large impact on those small economies' domestic financial markets, causing unbearably large changes in their exchange rates and domestic asset prices.

4.3 International reserve holdings

Since the 1997–98 Asian financial crisis, many East Asian countries have managed to generate surpluses on their current accounts, the bulk of which have been added to their foreign exchange reserves. They have done so for a number of reasons, but mostly for self-insurance against future crises. Before the 2007 crisis, these holdings were viewed as excessive, costly, and posing serious impediments to the resolution of global imbalances, but with the deepening of the crisis, it is no longer evident whether East Asia's emerging economies, except for China, hold enough reserves to withstand the global liquidity squeeze brought about by the global economic crisis.

In theory, countries with internationalised currencies that have adopted free floating would not need to hold as much reserves as countries with insular currencies. This is because they could, to a limited extent, use their own currencies to substitute for dollar liquidity insofar as their currencies are good substitutes for reserve currencies such as the US dollar and the euro. Having the ability to borrow in one's own currency is no small advantage as it helps to avoid committing the "original sin".

Indeed, countries with internationalised currencies such as the United Kingdom, members of the EM, Canada and Australia hold very small amounts of foreign exchange reserves, although there are exceptions, such as Japan, which has accumulated a large amount of reserves, even though the yen is much more internationalised than the Australian dollar. All Anglo-Saxon countries whose currencies are internationalised hold small amounts of reserves and have been borrowing externally to finance their persistent current account deficits. For instance, Australia's total reserves amounted to little over 3% of GDP at the end of 2008. Australia is one country which appears, on the surface at least, to have reaped the most from currency internationalisation over the past decade. It has consistently run a current account deficit in its recent history which has been financed by external borrowing, a feat that few emerging economies can expect to replicate.

But to what extent has currency internationalisation contributed to the sustainability of Australia's external financing for so long? There is no reason to believe that foreign lenders and investors have been willing to lend so much to Australia for so long simply because its currency has been international. Since currency internationalisation has not necessarily been a de jure process, a more realistic argument is that Australia has been able to accumulate such a large amount of foreign debt because of foreign lenders' favourable assessment of its debt sustainability based on its economic fundamentals. If the Australian experience is any guide, currency internationalisation per se would not necessarily give the country the ability to borrow more than when its currency is insular, although currency internationalisation does facilitate and, other things being equal, even lower the cost of external borrowing, but a country's capacity for external financing is likely to be determined by its economic fundamentals, not by its currency status. This is borne out by Australia's recent decision to enter into a swap agreement with the United States to supplement its reserves. A country's currency could satisfy most of the conditions for an international unit of account, but if there

is little or no global demand for that currency, internationalisation may not help the country to increase its access to international financial markets.

5. Currency internationalisation and regional financial and monetary cooperation and integration

5.1 Currency internationalisation and financial market integration in East Asia

In the years since the 1997–98 Asian financial crisis, as part of their efforts to become more resilient to external shocks, most East Asian countries, including the crisis-hit ones, have voluntarily, or under external pressure, increased the pace and scope of domestic financial reform to liberalise and open their financial markets and also to improve soundness, corporate governance, and risk management at financial institutions. The 1997–98 financial turmoil has also served as a catalyst for a regional movement towards the construction of a region-wide defence system against future crises, as well as financial market and monetary integration. This movement has culminated in the institutionalisation of two regional initiatives: the Chiang Mai Initiative (CMI)[9] and the Asian Bond Market Development Initiative (ABMI).

The ABMI, launched in 2003, was designed to diversify East Asia's bank-based financial system and to create broad and liquid regional bond markets by integrating the domestic markets of individual countries. Park and Wyplosz (2008) argue that one of the preconditions for the construction of efficient Asian bond markets is domestic financial deregulation and market opening. The market liberalisation and opening would increase the supply of investment grade local currency bonds and allow domestic investors to invest in foreign bonds and foreign borrowers to issue bonds denominated in different currencies in East Asia's domestic bond markets. Such market developments would then facilitate cross-border investment in bonds, thereby bringing about deeper integration of regional domestic bond markets.

Currency internationalisation that entails market liberalisation will not, however, be sufficient to foster cross-border investments unless regional financial market infrastructure that includes a regional system of clearing and settlement, regional credit guarantee institutions, hedging facilities, and regional credit rating agencies is also constructed. The infrastructure construction will also need to be accompanied by the harmonisation of legal and regulatory systems, domestic clearing and settlement systems, market practices, rating standards, accounting and auditing practices, and withholding taxes on bond coupon payments across countries in the region.

A number of East Asian countries have been vying to host a regional financial centre. As noted above, currency internationalisation reflects their efforts to improve the competitiveness of exports of financial services. But not all countries with internationalised currencies will succeed in developing a regional financial centre. At most, only a few will succeed. What, then, would be the most efficient selection process? A market-oriented approach, compared to a public sector-oriented one, has the advantage of selecting the most efficient countries for regional financial centres. In an evolutionary market-oriented process, those countries that do well in fostering liberalised and open financial systems with a well-developed financial infrastructure will then emerge as regional trading centres for Asian bonds and other financial instruments. Countries that succeed in internationalising their

[9] It was renamed the Chiang Mai Initiative Multilaterlisation (CMIM) in February 2009.

currencies will enjoy a competitive edge in hosting a regional financial centre, as well as region-wide currency internationalisation.

The market-led approach will certainly help to consolidate the financial markets of individual countries in East Asia, but it will also diversify and strengthen their linkages with global financial markets as it does not discriminate against non-regional borrowers and investors. This global linkage then raises an interesting question of whether the financial opening will produce market forces conducive to deeper regional or global integration of individual East Asian financial markets. It is most likely that both global and regional integration will proceed at the same time.

5.2 Currency internationalisation and monetary integration in East Asia[10]

The CMI and the ABMI are designed to help stabilise the bilateral exchange rates of the member countries. The CMI is meant to provide a collective line of defence against currency market turbulence, and the ABMI aims at reducing currency mismatches and at building deeper and more resilient markets, which should reduce both the frequency and impact of financial disturbances. Yet, neither initiative directly promotes monetary cooperation, in contrast to the Exchange Rate Mechanism (ERM), and, a fortiori, economic and monetary union (EMU). In many ways, the Asian countries have focused on treating the symptoms, not the cause, of currency instability.

Aware of this limitation, the ASEAN+3 countries agreed in 2006 to explore steps to create Regional Currency Units (RCU), similar to the European Currency Unit (ECU). The agreement was preceded by a proposal for the creation of an Asian Currency Unit (ACU). The proposal was developed by the Asian Development Bank and a number of Japanese economists. But the ACU initiative was opposed by several members on the ground that it was premature to discuss plans for monetary union at a time when both the CMI and the ABMI had not left the drawing board. However, the current global crisis is likely to combine with the interest in currency internationalisation to renew the search for a modality and time frame for monetary integration in East Asia.

There are several reasons for East Asia's renewed interest in monetary cooperation, and they are all associated with the lessons to be drawn from the current crisis. One lesson is that it is difficult to determine a level of foreign exchange reserves sufficient for self-insurance, in other words, that is large enough to fend off a crisis. The Greenspan-Guidotti-Fischer (GGF) rule prescribes that the holding of an amount of reserves equal to the country's short-term foreign currency liabilities is flawed as it excludes foreign equity investments, which display rather violent cycles of speculation and liquidation compared to other short-term foreign liabilities. Once a county is perceived to be susceptible to speculative attack, foreign investors may also dump their holdings of long-term bonds, and domestic residents may withdraw their bank deposits and convert them into reserve currency assets. Under these circumstances, no amount of foreign exchange reserves will be enough to keep speculators at bay.[11] Another lesson is that reserve currency countries enjoy exorbitant privileges as suppliers of global liquidity. The spread of the US subprime crisis has resulted in a severe squeeze on the availability of global liquidity denominated in the US

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[10] This section draws on Park (2009).

[11] According to Jeanne and Wyplosz (2003), speculators chiefly operate by taking short positions on currencies that they perceive as weak. If they are unsure about their expectations, they will not act when facing a central bank which holds sufficient reserves to sustain a speculative attack, because the outcome can be costly for them. If, however, the market sentiment builds up and expectations are firmly held, speculators can hold short positions of any size. In effect, a speculative attack is a run on the reserves of the central bank; the larger the reserves, the bigger the run. In this situation, equity and bond prices will continue to fall and the exchange rate will continue to depreciate until the central bank runs out of reserves to become insolvent.

dollar and a contraction of international financial intermediation. Although the US Federal Reserve has been busy pumping more dollars into the global financial system, in a global economy gripped with uncertainty and lack of confidence in the market and government, investors all over the world have been taking their dollars back to the United States to invest in US Treasuries, thereby exacerbating global liquidity shortages. Almost 50% of financial assets traded globally are US dollar-denominated, as is the bulk of cross-border financial transactions in East Asia. Since none of the Asian currencies qualifies as a key reserve currency, few countries in the region have been capable of supplementing their dollar shortages by printing more of their own money. The Japanese yen comes close to an internationally traded key currency, but it has not been able to complement the US dollar as a key currency.

Only the central banks of reserve currency countries – the United States and the EMU members – can assume the role of an international lender of last resort. Without the legal backing of a lender of last resort, financial institutions operating out of emerging economies will be at a competitive disadvantage vis-à-vis their counterparts from reserve currency countries. This is because the central banks of non-reserve countries will have to be ready, but may not be able, to supply foreign currency liquidity to domestic banks when they need it. Barring such readiness, domestic financial institutions engaged in international financial intermediation are exposed to dollar liquidity risk, impairing their soundness and stability. This competitive disadvantage will eventually drive local financial institutions out of global financial intermediation.

In order to mitigate the dollar liquidity constraint, it might be argued that emerging economies could take precautionary measures such as securing swap lines from the central banks of a reserve currency country. But swap borrowings entail interest costs. Another option open to those countries is currency internationalisation. As noted above, however, most internationalised currencies are hardly good substitutes for reserve currencies, especially in a crisis situation.

Although it is true that financial crises are not a daily event, they definitely occur periodically, as bubbles, excess, and calamity are part of the package of global finance. From that point of view, creating a global lender of last resort is high on the agenda for international financial reform. However, if past experience is any guide, the ongoing debate on international financial reform is unlikely to resolve the issue of the global lender of last resort and, hence, there will not be a level playing field where financial institutions from emerging economies can compete against those from reserve currency countries. In order to overcome this disadvantage, East Asia's emerging economies may consider joining either the US dollar bloc or the EMU, but this option is hardly realistic. A more practical and rational approach would be to engage in the creation of a monetary union among ASEAN+3 members. The present crisis will provide strong incentives for laying the foundation for a regional monetary union in East Asia. Some East Asian countries interested in internationalising their currencies may be more receptive to the idea of participating in a monetary union. But then the process of adopting a single currency is so arduous, as evidenced by the European experience, that any interest they may have in forming a monetary union may fade away as the global economy breaks out of the crisis.

6. Concluding remarks

If a national currency is used globally as a unit of account, a medium of exchange and a store of value without any restrictions other than those imposed on domestic residents, it qualifies as an international currency. However, unless it is fully usable or widely used for the settlement of international transactions, it is not necessarily an international currency. When a set of qualifications are met, internationalisation of an insular currency is a demand-driven

process. International currencies are freely held and traded by non-residents in offshore markets. In domestic financial markets, non-resident investors are allowed to invest in local financial instruments of their choice without any restrictions. At the same time, non-resident borrowers are allowed to issue financial products of various kinds denominated in the domestic currency to be marketed in both domestic and offshore markets to non-resident investors. When this broad definition is adopted, it appears that the Japanese yen is the only international currency in East Asia. Other regional currencies display varying degrees of convertibility. But even the Japanese yen remains a distant third key international currency, although Japan is the second largest economy in the world and has taken steps to reform its policy and institutions to facilitate the internationalisation of the yen since the late 1990s. In contrast, internationalisation of the Australian dollar has been more or less a de facto transformation. If the Japanese experience is any guide, currency internationalisation can be a long process that requires a wide range of institutional and policy reforms with uncertain benefits and costs. One might question why small emerging economies would entertain the idea of internationalising their currencies. It appears that some countries, encouraged by the successful internationalisation of the Australian dollar, are attempting to replicate a similar experience, but they have yet to articulate the objectives of their currency internationalisation.

China may harbour the ambition of elevating the status of the renminbi commensurate with its growing economic clout in the global economy, thereby creating a renminbi bloc in Asia as Japan has been trying to make the yen the dominant anchor currency in Asia. For other emerging economies, their motives are not clear, but the intensification of competition to host a regional financial centre in East Asia may have spurred them to consider pursuing internationalisation.

This paper argues that the benefits of currency internationalisation are rather uncertain and often unquantifiable, whereas the costs of increased domestic financial instability could be substantial. In order to minimise the costs, emerging economies would be better advised to push forward in the development of domestic financial markets that are broad and liquid enough to absorb external shocks before proceeding with currency internationalisation.

Table 1

Currency Invoicing of International Trade

	United States		United Kingdom		Japan		Germany		France		Canada		Australia	
	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
1980 US Dollar	96.0	85.0	17.0	29.0	65.7	93.0	7.2	32.3	20.3	37.1				
Euro	.	.	.	.	.	.	.	.	.	.				
Yen	0.2	1.0	0.1	1.3	29.4	2.4	0.0	0.0	0.1	0.7				
Home	96.0	85.0	76.0	38.0	29.4	2.4	82.5	43.0	60.5	37.1				
Other	3.8	14.0	6.9	31.7	4.9	4.6	10.3	24.7	19.1	25.1				
1992 US Dollar	92.0	80.0	22.0	22.0	46.6	74.5	7.3	18.4	16.5	23.1				
Euro	.	.	.	.	.	.	.	.	.	.				
Yen	1.5	3.0	0.7	2.4	40.1	17.0	0.3	1.7	0.8	1.3				
Home	92.0	80.0	62.0	43.0	40.1	17.0	77.0	55.9	54.6	45.7				
Other	6.5	17.0	15.3	32.6	13.3	8.5	15.4	24.0	28.1	28.9				
2000 US Dollar			29.0	34.0	52.4	70.7			42.6	57.2			68.0	51.4
Euro			21.0	19.0	6.1	1.2			44.6	32.9			0.3	2.3
Yen			.	.	36.1	23.5			.	.			0.8	5.2
Home			45.0	42.0	36.1	23.5			44.6	32.9			28.6	28.3
Other			4.0	5.0	5.4	4.6			12.8	9.9			2.3	12.8
2001 US Dollar			29.0	38.0	52.8	70			41.0	45.7	70.0		68.8	49.5
Euro			23.0	19	7.5	2.2			47.1	44.4	.		0.5	4.8
Yen			.	.	34.9	23.4			.	.	.		0.9	4.4
Home			45.0	40.0	34.9	23.4			47.1	44.4	23.0		27.7	30.7
Other			2.0	3.0	4.8	4.4			11.9	9.9	7.0		2.1	10.6
2002 US Dollar			25.0	37	51.7	68.3	31.6	34.5	37.0	45.2			67.9	50.1
Euro			21.0	27	8.6	4.4	49.0	48.0	51.0	46.8			1.4	8.7
Yen			.	.	35.8	24.9	.	.	.	.			1.0	4.0
Home			51.0	33	35.8	24.9	49.0	48.0	51.0	46.8			27.6	30.6
Other			2.0	3	3.9	2.4	19.4	17.5	12.0	8.0			2.1	6.6
2003 US Dollar		90.3			48.0	68.3	24.1	33.9	33.6	45.9			67.5	47.9
Euro		2.0			9.3	4.6	63.0	55.2	52.7	45.3			1.4	9.4
Yen		.			38.9	25	.	.	.	.			0.9	3.6
Home		90.3			38.9	25	63.0	55.2	52.7	45.3			27.8	32.6
Other		7.7			3.8	2.1	12.9	10.9	13.7	7.8			2.4	6.5
2004 US Dollar					47.2	68.8	24.1	35.9					69.4	49.8
Euro					9.2	4.7	61.1	52.8					1.3	9.1
Yen					40.1	24.6	.	.					0.8	2.8
Home					40.1	24.6	61.1	52.8					26.2	32.1
Other					3.5	1.9	14.8	11.3						6.2
2005 US Dollar					49.2	70.9								
Euro					8.4	4.2								
Yen					38.9	23.1								
Home					38.9	23.1								
Other					3.5	1.8								

Source: Bank of Korea, Kawai (2008), Kamps (2006), EURC

Table 2

The Share of International Reserves

(% of Total)

Year	US	Germany	France	EU	UK	Japan	Switzerland
	Dollar	Mark	Franc	Euro	Pound	Yen	Franc
1976	70.7	7	0.9		2	0.8	1.4
1977	79.4	8.2	1		1.6	1.2	2
1978	76.9	9.9	0.9		1.5	2.5	1.4
1979	62.4	10.4	0.9		1.7	2.6	2
1980	55.9	11.9	1.1		2.5	3.3	2.6
1981	58.4	11.2	1		2	3.6	2.5
1982	60	10.4	1		2	3.5	2.4
1983	68.8	10.6	1		2.4	3.8	2.2
1984	57	11	1		2.6	4.8	1.9
1985	55.3	13.9	0.8		2.7	7.3	2.1
1986	58.4	13.2	0.7		2.3	7.1	1.9
1987	56	13.4	0.8		2.2	7	1.8
1988	54.6	14.2	1		2.3	6.9	1.8
1989	51.3	17.8	1.4		2.3	7.2	1.4
1990	50.8	16.8	2.4		3	8	1.2
1991	51.3	15.4	3		3.3	8.5	1.2
1992	55.3	13.3	2.7		3.1	7.6	1
1993	56.6	13.7	2.3		3	7.7	1.1
1994	59.1	15.3	2.5		2.8	7.8	0.8
1995	59	15.8	2.4		2.1	6.8	0.3
1996	62.1	14.7	1.8		2.7	6.7	0.9
1997	65.2	14.5	1.4		2.6	6.8	1.3
1998	69.4	13.8	1.6		2.7	6.2	0.3
1999	71			17.9	2.9	6.4	0.2
2000	71.1			18.3	2.8	6.1	0.3
2001	71.5			19.2	2.7	5.1	0.3
2002	67.1			23.8	2.8	4.4	0.4
2003	65.9			25.2	2.8	3.9	0.2
2004	65.9			24.8	3.4	3.8	0.2
2005	66.5			24.1	3.8	3.8	0.1
2006	65.5			25.1	4.4	3.1	0.2
2007	63.9			26.5	4.7	2.9	0.2

Source: IMF Annual Reports

Table 3

International money market instruments by currency

(% of Total)

	US dollar		Euro		Pound sterling		Yen		Australian dollar		Swedish krona		Canadian dollar		Singapore dollar	
	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II
Dec.1989	84.4	-	4.6	-	0.7	-	0.4	-	9.7	-	-	-	0.1	-	-	-
Dec.1990	77.7	-	10.1	-	2.3	-	1.0	-	8.0	-	0.3	-	0.0	-	-	-
Dec.1991	74.8	-	14.8	-	2.2	-	0.6	-	7.0	-	0.0	-	0.1	-	-	-
Dec.1992	81.3	-	10.9	-	1.5	-	0.4	-	5.5	-	0.0	-	0.2	-	-	-
Dec.1993	77.4	41.3	9.4	24.9	4.4	7.4	0.7	13.4	4.9	1.1	0.3	0.2	0.5	4.1	-	0.00
Dec.1994	69.9	39.3	14.2	26.0	4.8	7.1	3.2	15.8	3.0	1.3	0.4	0.2	0.3	3.5	-	0.01
Dec.1995	59.2	37.7	19.6	27.7	5.8	6.5	4.8	16.2	3.8	1.4	0.2	0.2	0.2	3.1	-	0.00
Dec.1996	60.9	40.7	14.5	27.2	5.0	7.3	7.2	15.0	3.3	1.5	0.0	0.2	0.2	2.5	0.0	0.00
Dec.1997	59.6	46.0	15.9	24.8	6.9	7.8	7.5	12.9	2.7	1.2	0.2	0.1	0.2	2.0	-	0.00
Dec.1998	58.1	46.8	17.3	27.2	7.2	7.7	8.1	11.1	2.9	0.8	0.0	0.2	0.2	1.3	-	0.01
Dec.1999	43.4	48.3	33.7	28.5	7.3	7.7	9.5	9.7	1.9	0.7	0.2	0.1	0.2	1.1	0.0	0.04
Dec.2000	43.5	50.6	32.2	29.5	7.6	7.5	11.1	7.5	1.4	0.5	0.1	0.1	0.2	0.9	0.1	0.06
Dec.2001	40.9	51.4	31.2	31.8	10.2	7.0	11.6	5.7	1.4	0.4	0.1	0.1	0.2	0.7	0.0	0.08
Dec.2002	33.2	46.7	40.8	37.2	12.8	7.0	5.3	4.9	1.5	0.5	0.2	0.1	0.2	0.6	0.0	0.09
Dec.2003	29.0	40.8	47.1	43.4	13.6	7.0	3.0	4.4	1.1	0.8	0.1	0.1	0.4	0.7	0.1	0.08
Dec.2004	28.7	37.0	47.5	46.8	15.1	7.4	2.1	4.0	1.5	0.9	0.3	0.2	0.4	0.8	0.1	0.10
Dec.2005	29.4	38.6	43.6	45.2	18.0	7.6	1.7	3.4	1.6	1.0	0.3	0.2	0.5	1.1	0.2	0.11
Dec.2006	32.8	36.4	40.5	47.3	16.8	8.2	1.6	2.8	1.2	1.1	0.3	0.2	0.4	1.0	0.2	0.11
Dec.2007	33.7	34.9	42.0	48.9	13.5	7.9	3.0	2.7	1.0	1.1	0.3	0.2	0.4	1.2	0.3	0.12
Mar.2008	30.6	33.8	46.5	50.1	12.8	7.5	3.4	2.9	1.0	1.1	0.4	0.2	0.4	1.2	0.2	0.12
Jun.2008	29.2	34.0	47.0	49.7	13.4	7.8	3.6	2.7	1.1	1.1	0.3	0.2	0.3	1.2	0.2	0.13
Sep.2008	32.3	35.9	46.0	47.5	10.7	8.1	3.7	2.9	0.9	1.0	0.5	0.2	0.2	1.2	0.2	0.14

Note: Columns I and II denote international money market instruments and international bonds and notes, respectively.

Source: BIS Quarterly Review: various issues

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