

## Basket weaving: the euromarket experience with basket currency bonds<sup>2</sup>

*ECU-denominated international bonds owed much of their limited success in the 1980s and 1990s to restrictions on the internationalisation of the Deutsche mark and to speculative investment, rather than simply to the benefits of diversification. Basket bond issuance may come at the cost of a less liquid domestic bond market.*

*JEL classification: E42, E58, F02, F31, F33, F36, G15.*

Asian policymakers have given priority to developing domestic bond markets. The Asian financial crisis of 1997–98 suggested that more developed local bond markets could have limited risky mismatches between foreign currency liabilities and home currency assets. Since the crisis, central banks have also agreed to a network of swap arrangements to prevent a recurrence of speculators' attacking first one and then another currency. The depegging of the Chinese currency from the US dollar has made concerted exchange rate management possible as a third element in regional cooperation, along with bond market development and foreign exchange reserve sharing.

In this context, the eurobond market has been seen as a precedent for regional market development in the service of financial, currency and monetary cooperation. In particular, market participants' use of a basket of European currencies that eventually became the euro strikes many as an example worth pursuing in Asia. Leading advocates in Asia include Chaipravat et al (2003) and Ito (2004).<sup>3</sup> The latter links multicurrency bond issuance to prospective management of currencies against a common basket, such as that proposed by

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<sup>3</sup> See also Mori et al (2002), Plummer and Click (2005) and Eichengreen (2006).

Williamson (1999). More recently, ASEAN+3 (2005) refers to “possible issuance of Asian currency-basket bonds” (see also Jung et al (2002)).

What was the euromarket experience with multicurrency or basket bonds? Did market participants use officially defined baskets or “roll their own”? Did they use baskets to diversify or for other reasons?

This special feature takes up these questions. The next section examines the record of basket issuance in the euromarket before the inception of the euro in 1999. The following sections consider the theoretical and practical advantages and disadvantages of basket bonds. The final section concludes.

## Basket bonds in the international bond market

A basket currency is a weighted average of a collection of currencies. The simplest example would include just two currencies, for instance one defined as 50 US dollar cents and 60 Japanese yen. The issuer of a bond so denominated promises to pay interest and principal in an amount calculated on the payment date by taking the spot exchange rate of each of the constituent currencies against the settlement currency and summing the amounts.

Four baskets were used to denominate international bonds in the second half of the 20th century. Three of them turned out not to have much staying power. The fourth proved to be most successful just before it became the euro in 1999. In all but one case, private parties adopted existing official units of account and grappled with the inherent possibility that the official sponsor might change or discontinue using the basket.<sup>4</sup>

The basket currencies were generally virtual currencies, that is, it was not possible to settle in them. Investors bought the bonds with an actual currency and received payments of interest and principal in an actual currency – usually the US dollar. It was said that the Benelux banks profited less from marketing currency basket bonds than from exchanging the coupons for domestic currency each year at the banks’ counters in Luxembourg. Only the last basket, the ECU, which is defined below, benefited from the initiative of a Belgian bank in the early 1980s to provide clearing facilities, so that ECU-denominated debt service could be settled in ECUs.

### *The European unit of account (EUA)*

The first basket currency to be used in Europe after World War II was the European Unit of Account (EUA). Based on the currencies involved in the European Payments Union, it aimed at preserving the gold value of an

Four baskets were used to denominate bonds in the euromarket:

the European unit of account ...

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<sup>4</sup> There were precedents for bonds denominated in some combination of currencies. Before the First World War international bonds floated in Europe not infrequently were multicurrency bonds or denominated in gold francs. A multicurrency bond, used by Russian railroads among others, gave the investor the right to be paid in a choice of currencies – typically French francs, Reichsmarks or pounds sterling, at the spot exchange rate prevailing at the date of issue. Rather than a true basket, such contracts, along with widely used gold clauses, were really embedded currency options that protected the investor against currency devaluation. After the collapse of the Bretton Woods fixed exchange rate system, there was a brief flurry of dual currency bonds – eg Deutsche mark/US dollar. Such bonds in effect gave the investor a normal bond and a long-dated currency option, and thus were not really basket bonds.

investment. The first eurobond, which happened to be for a Portuguese borrower, was denominated in the EUA. "EUAs were complex instruments, dependent for their value on a composite of 17 currencies and the price of gold" (Gallant (1988, p 77)). The recipient of a payment in EUAs, initially the borrower and subsequently the investor, could choose the currency of payment (Fisher (1981, p 140)). There were 96 issues amounting to about \$2 billion between 1963 and 1982 (Gallant, *ibid*). Its definition shifted in response to the breakdown of the Bretton Woods system: "From 1972 when, at least for the currencies of the EEC members, the system of fixed parities vis-à-vis gold was replaced by a system of central rates, a new EUA emerged, based on the central rates of the nine EEC currencies" (De Beckker (1984, p 129)). The EUA never really took off with investors or issuers.

#### *The eurco*

... the eurco ...

The next, and most short-lived, basket currency was the European Composite Unit (eurco). A purely conceptual construct, it was defined as a weighted average of the nine European Economic Community currencies. It was apparently not related to anything actually used by anyone. Advance notice from the investor was required as to the currency in which payment was to be made. Three bonds in the amount of \$130 million were issued in 1972–73 (Fisher (1981, p 139)). It was a genuine basket bond but its purely private definition did not catch on. That is probably one reason why it was succeeded by the SDR in 1975.

#### *Special drawing rights (SDRs)*

... the SDR ...

The private SDR was the exact equivalent of the IMF's Special Drawing Rights (SDR) and its value each day was the price in dollars or other currencies as calculated and published at noon each day in Washington by the IMF. Originally, 16 major currencies were used to define the SDR, but in 1981 the basket was reduced to five currencies: the dollar, Deutsche mark, yen, French franc and pound sterling, with weights chosen to reflect the respective economies' size and international trade. The terms and conditions of SDR bonds provided that if the IMF stopped using the SDR or publishing its value, a calculation agent appointed by the issuer would do so. Payments were generally made in dollars, although payments in other currencies may have been anticipated. The BIS data on international bond issues show 13 SDR issues, including the first two by the Swedish city of Malmö and the Swiss company Sandoz, aggregating to the sum of just \$594 million. With few countries managing their currencies against the SDR and no governments politically committed to it, private SDR bonds put in no more than a cameo appearance.<sup>5</sup>

<sup>5</sup> Eichengreen and Frankel (1996, p 366): "If the dollar is the world monetary system's version of the English language, the SDR is the system's version of Esperanto. The SDR was created by the IMF to be an ideal international currency. Its definition makes it intrinsically more useful than the dollar, just as Esperanto is intrinsically superior to English. The reason that the SDR is even less widely used today than it was ten years ago is that, like Esperanto, it lacks a natural base of constituents who would use it even if it was not in international use". See also Kindleberger (2000).

### *The European currency unit (ECU)*

When investors regained their appetite for the dollar as it strengthened in the early 1980s, the banks that had been lead-managing EUA or SDR issues returned to arranging or co-managing dollar-denominated issues. However, as the big banks began to dominate the market, the smaller continental banks looked back to the basket currency concept, where they had developed a loyal retail investor base and expertise.

... and the ECU ...

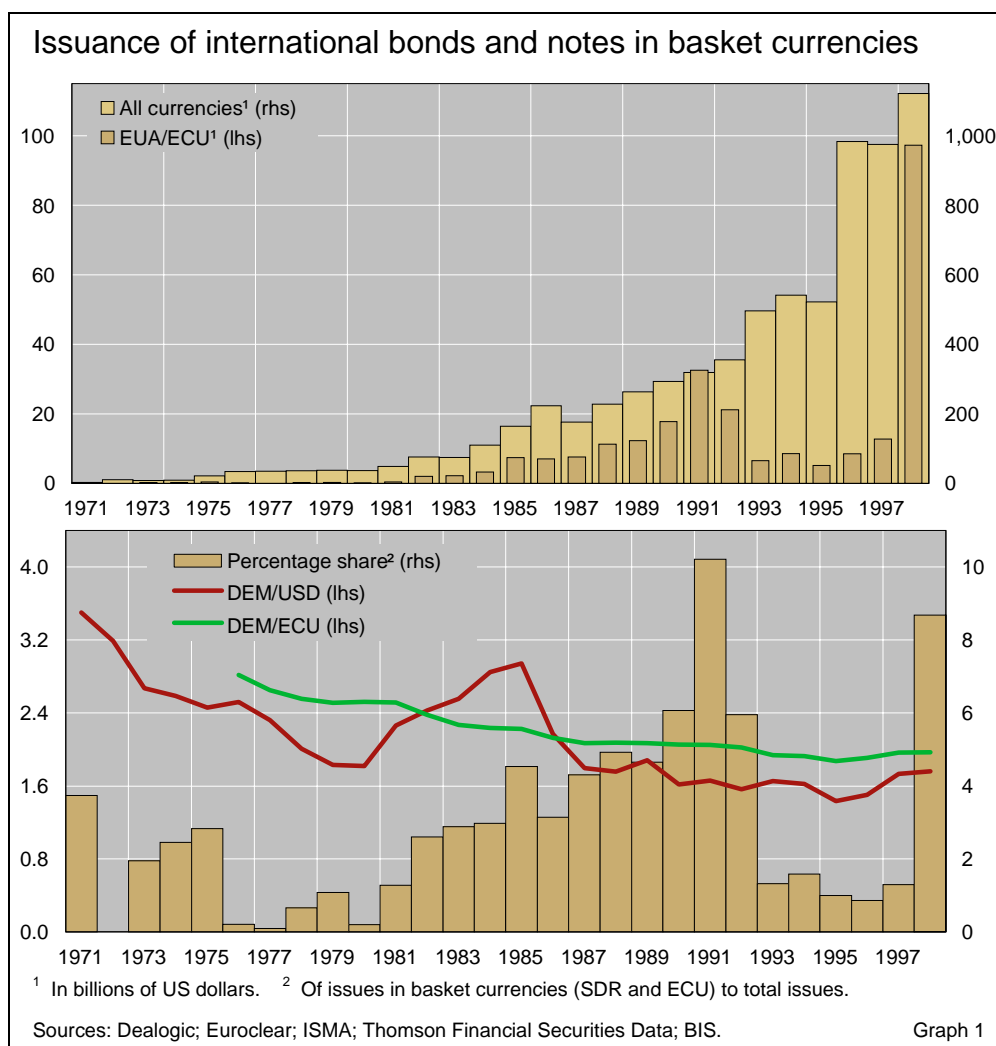
The continental banks took up the most successful of the basket currencies and the only one that had real staying power, the ECU or European Currency Unit. Like the EUA and SDR, it was a private basket that mimicked a unit of account of a public sector entity, in this case the European Community. The ECU was defined as so many hundredths of a Deutsche mark, so many French francs, so many Belgian francs, and so on (Table 1).

Of course, as the European Community expanded, it changed the ECU's composition to include the currencies of new members. Correspondingly, with very few exceptions, payments in private ECUs also changed accordingly, whether associated with new or outstanding issues. However, the changes did not result in any volatility to speak of in the value of the ECU measured in terms of either the dollar or the Deutsche mark. This resulted in part from the small weights assigned to the new currencies, which were in any case expected to track the major European currencies.

Perhaps the combination of being tied to an official European unit of account against which currencies were stabilised and the stability in its value against the Deutsche mark explains the relative success of the private ECU. According to BIS data, 1,218 issues were completed with an aggregate principal value of \$168 billion equivalent to end-1997 (Graph 1). A 10th of all international bonds were issued in ECUs in 1991. In addition, commercial banks made loans denominated in ECUs, including home mortgages in Italy and the United Kingdom. The ECU was also sometimes included in multicurrency loans (BIS (1991, pp 146–8), EMI (1996, pp 39–40)).

Composition of the ECU			
	13 March 1979	17 September 1984	21 September 1989
Belgian franc	3.66	3.71	3.301
Danish krone	0.217	0.219	0.1976
Deutsche mark	0.828	0.719	0.6242
Greek drachma	–	1.15	1.44
Spanish peseta	–	–	6.885
French franc	1.15	1.31	1.332
Irish pound	0.00759	0.008781	0.008552
Italian lira	109.0	140.0	151.8
Luxembourg franc	0.14	0.14	0.13
Dutch guilder	0.286	0.256	0.2198
Portuguese escudo	–	–	1.393
Pound sterling	0.0885	0.0878	0.08784

Table 1



... which, uniquely, traded privately and separately from its constituent currencies

The ECU Banking Association created a clearing system for ECUs and some Benelux banks offered their customers ECU-denominated accounts so that coupon and principal payments could be credited to them without having to be paid in dollars and bearing the foreign exchange costs. The BIS offered the service of ECU clearing (BIS (1986, pp 172–3; 1987, pp 183–4; 1999, p 162)). This can be considered a form of private money, in contrast to the other baskets that were settled in major or constituent currencies.

The separate existence of the private ECU meant that, like a closed-end mutual fund, its value could vary in relationship to its intrinsic or theoretical value. Arbitrage mechanisms, while limited, constrained this premium or discount to theoretical value to a narrower range than that observed in closed-end funds. Still, the implication of the discount or premium is that the ECU's performance as a hedge was subject to an extra source of variance.

### Advantages of basket bonds

Basket bonds offered three advantages:

One evident advantage of basket bonds is the diversification of currency risk. In practice, regulatory arbitrage, namely the avoidance of German restrictions on the internationalisation of the Deutsche mark, also figured importantly in the

use of the ECU in the eurobond market. In the lead-up to the ERM crisis of 1992, a speculative motive was also evident.

### *Diversification*

Basket currency bonds promise investors a less volatile investment because of the diversification of the constituent currencies. If one constituent currency loses value against the dollar or the investor's base currency, the impact would be limited to its share of the basket.<sup>6</sup> Theoretically, an investor could buy a portfolio of bonds denominated in all of the currencies in the basket.

ready-made  
diversification ...

In practice, the ability of investors to "roll their own" varies between retail and institutional investors. Retail investors benefit from pre-packaged diversification. They would otherwise have to buy a large number of bonds and they might not have enough disposable funds, given the market convention of minimum denominations. In addition, the bonds are unlikely to be available: any issuer is unlikely to have issued in all the currencies in the basket, and in any case the maturities of any available bonds would vary. For institutional investors, by contrast, basket weights are unlikely to match the currency distribution of liabilities (in the case of a multinational financial firm) or a preferred distribution of foreign exchange risk assumed.

... especially for  
retail investors ...

For issuers, basket bonds similarly hold out the promise of a smaller exposure to exchange rate movements. For much of the time basket currencies were used, the currency swap had not been invented, so that liabilities in one currency could not be easily transformed into liabilities in another currency. In fact, investment bankers pitched currency basket bonds to issuers as a natural liability to hedge fixed assets in Europe owned by US multinational corporations. When the US accounting rules changed in 1982, US treasurers sought to match fixed assets with long-term liabilities in the same currency (Andrews (1983–84)). In the case of the European currencies that were managed against the ECU, governments were attracted to ECU issuance by the promise of limited exchange rate risk.<sup>7</sup>

### *Regulatory arbitrage*

Basket currency bonds facilitated not only diversification but also arbitrage of regulation. It is little appreciated that such success that the ECU and its predecessors enjoyed in the euromarket owed much to official restrictions on the use of the Deutsche mark to denominate bonds for non-residents. True, the ECU construct allowed the international marketing of other currencies whose use for the denomination of international bonds was not legal initially. Much

... a proxy for the  
Deutsche mark,  
given limits on its  
use ...

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<sup>6</sup> Diversification benefits in the context of Asia appear to be considerable. Ogawa and Shimizu (2004) and McCauley and Jiang (2004) find diversification benefits, while Park and Park (2005) express reservations. These benefits, however, in part derive from the closed nature of important bond markets in Asia, not least that of China with its capital controls, but also those of Indonesia or the Philippines, where idiosyncratic political risk tends to lower the correlation of returns with those in major markets.

<sup>7</sup> In the terms of Kenen (2006), the ECU benefited from being an internal basket for many economies, while the SDR suffered from being an external basket for a few.

more importantly, however, ECU issuance allowed non-German market participants to market Deutsche mark proxies.

In particular, the Bundesbank's efforts to restrain the internationalisation of the Deutsche mark created an opening for the ECU. A gentleman's agreement with leading German banks in 1968 established an *anchoring* principle requiring a German bank to lead the underwriting of a Deutsche mark bond issued by a non-resident.<sup>8</sup> In 1985, the anchoring principle was broadened to allow German subsidiaries of foreign banks to lead-manage foreign Deutsche mark bonds. Only the launch of the European Single Market project forced the acceptance in August 1992 of foreign bank branches as well as subsidiaries as lead underwriters of foreign Deutsche mark bonds.<sup>9</sup>

Because of this regulation, the attraction of a basket waxed when the dollar fell out of favour. When the dollar weakened in the early 1970s, in 1977–78 or in the late 1980s, investor demand swung away from the dollar to the Deutsche mark (Cohen (2005)). German banks tended to gain market share as underwriters from US, Benelux, French and Swiss banks.<sup>10</sup> Under these circumstances, the latter sought an alternative to the US dollar, and the more closely it could mimic the Deutsche mark, the better. And in fact all of the basket currencies contained the Deutsche mark.

The nationality of underwriters of Deutsche mark and ECU issues makes very clear the advantage of the ECU to French, Benelux and other continental European banks. Available data do not permit the isolation of the pre-1985 experience, but a seven-year period ending in mid-1987 shows the dominance of German banks as lead underwriters of Deutsche mark bonds (Table 2, top panel). The liberalisation of 1985 is already evident, however, in two German subsidiaries of foreign firms serving as lead underwriters.

The full effects of the 1985 liberalisation of the Deutsche mark sector are evident in the slippage of the German banks in the early 1990s (Table 2, centre panel). By then, banks headquartered outside Germany claimed a market share of almost three quarters in running the books of Deutsche mark-

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<sup>8</sup> That year, a *rationing* mechanism was set up to limit issuance. In addition, the practice of *converting* Deutsche marks raised by foreign issuers into dollars and transferring them abroad was informally encouraged. "These agreements made it easier for the Bundesbank to stabilise recourse to the capital market ... German credit institutions ... were shielded from competing [with] foreign credit institutions and were thus able to achieve higher earnings in [the] underwriting business." The Bundesbank also prevailed on foreign central banks to prevent Deutsche mark issues by non-residents outside Germany (Franke (1999, p 247)).

<sup>9</sup> The Bundesbank kept "the anchoring principle so that it could retain its influence on D-mark issues, and in particular on innovative forms". A requirement that foreign banks have "a sound syndication department in Germany ... protected Germany, as a financial centre, from the migration of the underwriting business" until the inception of the euro in 1999 (ibid, p 248).

<sup>10</sup> At the time, only Swiss banks were allowed to arrange or co-manage Swiss franc-denominated bond issues and the Swiss banks operated a cartel that excluded foreign-owned Swiss banks from Swiss franc bond issues. Moreover, the German and Swiss banks for a time had a non-aggression pact under which they did not open branches or subsidiaries in each other's country. Another approach was to underwrite bonds in the smaller currencies closely linked to the Deutsche mark, but this posed a disadvantage compared to issuing basket bonds. Austrian schilling and Danish krone bonds benefited from expectations that these currencies would continue to closely track the Deutsche mark but the domestic markets for those currencies were too small to justify most foreign banks' establishing a presence, which was a requirement to lead-manage a bond issue in kroner or schillings.

Lead underwriters of Deutsche mark and ECU eurobonds			
By number			
Nationality of lead underwriter	Currency denomination of eurobond		
	Deutsche mark	ECU	Total
January 1980–July 1987			
German	622 <sup>1</sup>	0	622
Others	32	277	309
Total	654	277	931
January 1991–August 1992			
German	116	14	130
Others	207	132	339
Total	323	146	469
September 1992–December 1998			
German	440	0	440
Others	1,292	56	1,348
Total	1,732	56	1,788
Note: The $X^2$ test statistic for the independence of currency denomination and nationality is 793.7 for the top panel, 34.8 for the centre panel, and 18.9 for the bottom panel while the critical value for the 1% level of significance is 6.6.			
<sup>1</sup> German subsidiaries of Credit Suisse First Boston and Morgan Guaranty.			
Sources: Dealogic; Gallant (1988, pp 89 and 104); BIS.			Table 2

denominated foreign bond issues. Meanwhile, German banks won only about a 10th of ECU mandates. Looser regulation led to less specialisation in the two segments than in the 1980s.

After the liberalisation required by the Single Market project, German banks lost further market share in the Deutsche mark sector while giving up on the moribund ECU sector (Table 2, bottom panel). Without the protection of the requirement for a German subsidiary, foreign banks won two thirds of the Deutsche mark mandates. Meanwhile, the ECU sector declined owing both to the contestability of the Deutsche mark sector and to the 1992–93 crises.

#### *“Convergence trade”*

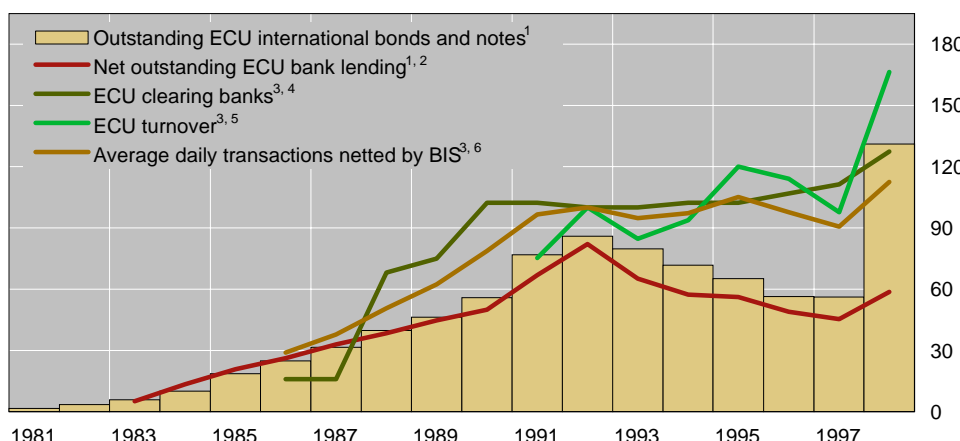
The theoretical argument for basket bonds focuses on diversification of currency risk. In practice, much demand for ECU bonds reflected a search for yield on the presumption of currency stability (the “convergence trade”).

Two stylised facts about ECU bond issuance point to their serving as a means for investors to speculate on currency stability to achieve excess returns over Deutsche mark yields. First, issuance rose into early 1992, the year of the first crisis in the European exchange rate mechanism (ERM). Thereafter, events running from the Danish referendum in June 1992 to depreciations in the autumn to the acceptance of broad bands in late 1993 severely tested the ECU bond markets (BIS (1993, pp 120–23)). Second, after the exit of major currencies from the ERM imposed losses on holders of ECU bonds in the Benelux countries and Germany, issuance subsequently dropped off very sharply and the stock of ECU bonds outstanding shrank for the next five years (Graph 2). The stock of ECU bank claims and measures of turnover

... and high coupons promising excess returns



## The private ECU market



<sup>1</sup> In billions of ECUs. <sup>2</sup> Net outstanding bank claims defined as gross cross-border claims minus interbank deposits in BIS reporting countries. <sup>3</sup> 1992 = 100. <sup>4</sup> Number of private ECU clearing banks participating in the BIS clearing system in October 1986 and March of other years; March 1992 observation is 44. <sup>5</sup> Turnover of ECU securities in primary and secondary markets. Instruments covered are straight eurobonds, straight domestic bonds, convertibles, floating rate notes, certificates of deposit and short- and medium-term notes; turnover was ECU 1.5 trillion in 1992. <sup>6</sup> In number, as of December each year; December 1992 observation is 6,496.

Sources: National authorities; Cedel Dealogic; Euroclear; ISMA; Thomson Financial Data; BIS.

Graph 2

also turned down or tended to level off.<sup>11</sup> The stock of ECU bonds contracted in parallel with a reduction in non-resident holdings of domestic bonds in high-interest European currencies.

Only on the eve of the introduction of the euro at the start of 1999 did ECU bond issuance recover (BIS (1998, pp 153–4)). By then, however, the ECU's appeal had become that of a proto-euro. Issuance reflected the confidence that the euro would be introduced at one euro to one ECU. This decision by the European authorities put ECU bonds on a through train to the euro bond market, while bonds denominated in the predecessor currencies were shunted onto the side track of "redenomination" on the way to the euro bond market.

## Disadvantages of baskets

Basket bonds carry two burdens:

Competing with these advantages, basket currencies had several disadvantages. These derive broadly from complexity and illiquidity.

### Complexity

legal uncertainty and complexity ...

Any multicurrency bond needs criteria to select and to weight the currencies. Generally, issuers used officially defined baskets to denominate bonds in the euromarket. This choice, however, required lawyers to craft bond contracts to accommodate changes in official definitions.

<sup>11</sup> De Boissieu (1996, p 125), notes, "A significant drop in the market shares of the private ECU occurred after the two crises in the European Monetary System in 1992–93 and the consequent loss of credibility. The recovery has been slow since then. Market operators were negatively impressed over a certain period by the lack of both economic convergence in Europe and political credibility of European integration. Therefore, the premium, that is the gap between the theoretical value of the ECU basket and the actual value of the ECU, has increased dramatically and is still quite high".

Thus, with basket bonds, few people understood how the formulae worked and additional effort was required to explain the product to issuers and investors. Investors worried that the definition might be found lacking if the international exchange rate system changed. Use of some officially defined basket would not get around this problem. For example, bonds based on the SDR or ECU were sometimes referred to as private SDRs or ECUs to distinguish them from the official claims and liabilities so denominated. If the IMF or European Community ceased to use and publish the value of the SDR or ECU, what would happen to a bond issue denominated in these baskets? Of course, the terms and conditions of the bonds anticipated such a development but it was uncertain whether the lawyers had thought of every eventuality.

When different banks and lawyers arranged currency basket bonds, there was always the possibility that the definitions or formulae might differ slightly. If the differences were material, the bonds risked being treated as not being in the same currency. For instance, the Kingdom of Belgium issued two ECU bond issues that deliberately had a non-standard definition of the ECU. At the time, Portugal was about to join the European Community and the Portuguese escudo was perceived as a weak currency. There was concern that adding the escudo to the ECU basket would make the ECU less attractive to investors. In the event, both issues were repaid before the euro was introduced as the single European currency and existing ECU bonds became euro bonds.

### *Illiquidity*

Basket bonds work against bond market liquidity directly and indirectly. Basket bonds themselves tend not to be very liquid because they attract buy-and-hold retail investors for whom they carry the advantage of one-stop diversification. As noted, basket bonds hold less attraction for institutions, with their greater propensity to trade in the secondary market.<sup>12</sup>

... and illiquidity

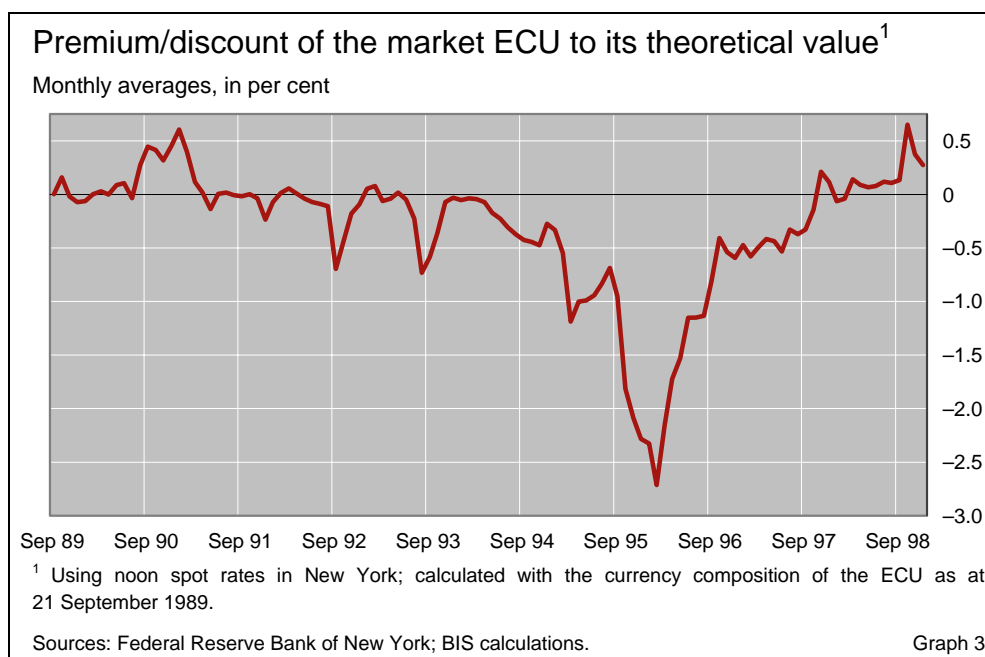
One class of institutional investor that can be drawn into a basket bond market is banks and specialised funds that can arbitrage between the basket and its underlying constituents. In particular, if the basket becomes cheap, such arbitrageurs will tend to buy it against short positions in its underlying currencies. Thus, once private banks ceased stabilising the ECU against its theoretical value,<sup>13</sup> its usual discount to its theoretical value provided a professional bid that might otherwise have been missing (Graph 3).

Basket bonds issued by governments also work against the liquidity of national bond markets in an opportunity cost sense. If a government sells a basket bond, or indeed any foreign currency issue, it leaves less paper in the domestic currency market. A smaller government bond market tends to have less turnover, and worse liquidity as measured by, say, the bid-ask spread (CGFS (1999a,b), McCauley and Remolona (2000), Mohanty (2002), Jiang and McCauley (2004)).

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<sup>12</sup> An important exception was Japanese life insurers (McCauley and Yeaple (1994)).

<sup>13</sup> See Folkerts-Landau and Garber (1992).



Thus, European governments that issued ECU bonds tended to issue less domestic currency denominated paper and at the margin to enjoy less liquidity in their domestic markets. This opportunity cost arose not so much from the sale of ECU paper in the international market. To some extent, as with Belgium's ECU 1.25 billion bond in March 1991, such issuance simply refunded existing foreign currency debt, in this case maturing Deutsche mark and Swiss franc bonds (BIS (1991, p 148)). The greater cost arose from government issuance of ECU bonds in the domestic bond markets of France, Italy, Spain and the United Kingdom. At end-1991, outstanding issues there of domestic ECU bonds and bills had reached the equivalent of \$63 billion (BIS (1992, p 185)).<sup>14</sup> By splitting the domestic government bond market into two currency sectors, such ECU issuance made for less liquid markets.<sup>15</sup> Admittedly, this cost might have been small, given the development of the major European government bond markets at the time. However, in less developed bond markets the damage from similar debt management policies could be larger.

## Conclusion

It might be easy to imagine that basket bonds paved the way to monetary union in Europe. According to this view, European investors buying basket bonds might well have broadened their investment horizon beyond their home market while assuming limited, diversified currency risk. Issuance of basket bonds might have increased monotonically until the ECU basket became the euro. On

<sup>14</sup> In 1990, 40% of the \$75 billion equivalent of outstanding international bonds denominated in the ECU had been issued by official national and supranational issuers (BIS (1991, p 147)).

<sup>15</sup> Some of these countries benefited from the use of the official ECU to denominate claims arising from short-term intra-European swaps, which use shared the exchange risk between a central bank that drew on a swap and the one drawn upon. But this feature of the official ECU did not depend on these governments' use of the ECU to denominate their domestic debt.

this view, a little official encouragement of basket bonds in Asia might lead to a market process propelling Asian bond markets towards Asian monetary union.

This special feature has suggested that the facts fit uncomfortably with this reconstruction of the European record. Baskets to some extent served as a proxy for the Deutsche mark at a time when the Bundesbank was intent on keeping control of its own creation. Support for this reading comes from the nationality of underwriters of ECU and Deutsche mark international bonds. On this view, basket bonds in Asia would have the best prospects if the authorities of the region's key currency resisted its internationalisation.

The evidence further suggests that ECU bond issuance also responded to a speculative search for yield among European currencies. After the exchange rate risks underlying the ECU bonds' relatively high coupons became manifest in 1992, issuance of ECU bonds collapsed. By then, the liberalisation of the Deutsche mark foreign bond market had made it unnecessary for non-German banks to use the ECU as a proxy. The ECU bond market only revived in 1998 after European leaders decided that the basket would become the euro. Thus, it is more correct to say that the prospect of the euro revived the ECU bond market than that the euro bond market grew out of the ECU bond market.

Does this mean that it is a mistake to try to nurture a market for Asian currency basket bonds? Not necessarily. But the European experience draws attention to the linkage between private and official use of a basket as well as the issue of liquidity.

It appears that official use of a basket is a necessary but not sufficient condition for widespread private use. The least successful basket bond in the eurobond market history was the eurco, which did not benefit from an official definition. This precedent may suggest that denomination of bonds in an Asian basket defined solely for the purpose would be unlikely to catch on. Even official use of the SDR did not ensure private acceptance.

Liquidity considerations suggest that public issuers might do well to think twice before selling basket bonds. International financial institutions, whether in Europe before the euro or in Asia today, that sell basket bonds must decide whether to pass the multicurrency exposure on to borrowers or to hedge it out, in whole or part. Either approach might involve a cost compared to another funding route, reflecting the need to offer a higher yield on a basket to attract arbitrageurs rather than natural buyers. Such institutions need to weigh any policy benefits of basket issuance against any opportunity loss to be borne by their borrowers or shareholders.

Governments whose debt serves as a benchmark in the national currency face a different choice. More important than the narrow cost considerations would be the diversion of issuance away from the domestic market, which deprives it of the benefits of larger benchmarks. In some circumstances foreign currency funding may be well advised, and basket issuance might make sense. Otherwise, splitting issuance across currencies can work against liquidity and bond market development. Any policy reason for basket issuance by a national government must outweigh the opportunity cost of lower domestic currency bond issuance.

## References

Andrews, M D (1983–84): “FASB 52: Corporate response and related foreign exchange market effects”, *Federal Reserve Bank of New York Quarterly Review*, Winter, pp 69–70.

ASEAN+3 Finance Ministers (2005): *Progress report*, 4 May, Istanbul.

Bank for International Settlements (1986–99): *Annual Report*.

Chaipravat, O, B B Supaphol and K Sangsubahn (2003): “Regional self-help and support mechanisms: beyond the CMI”, paper submitted to the ASEAN Secretariat.

Cohen, B H (2005): “Currency choice in international bond issuance”, *BIS Quarterly Review*, June, pp 53–66.

Committee on the Global Financial System (1999a): “Market liquidity: research findings and selected policy implications”, *CGFS Working Group Report No 11*, May.

——— (1999b): “How should we design deep and liquid markets? The case of government securities”, *CGFS Publication No 13*, October.

De Beckker, R (1984): “The EUA sector”, in I M Kerr (ed), *A history of the eurobond market: the first 21 years*, Euromoney Publications, London, pp 128–9.

De Boissieu, C (1996): “The SDR in the light of the multicurrency system”, in M Mussa, J M Boughton and P Isard (eds), *The future of the SDR in light of changes in the international financial system*, IMF, Washington DC, pp 122–44.

Eichengreen, B (2006): “The parallel currency approach to Asian monetary integration”, in panel on Asian currency matters at the American Economic Association, Boston, Massachusetts, 7 January 2006.

Eichengreen, B and J Frankel (1996): “The SDR, reserve currencies and the future of the international financial system”, in M Mussa, J M Boughton and P Isard (eds), *The future of the SDR in light of changes in the international financial system*, IMF, Washington DC, pp 337–78.

European Monetary Institute (1996): *Annual Report*, “Private ECU markets”, pp 39–40.

Fisher, F (1981): *International bonds*, Euromoney Publications, London.

Folkerts-Landau, D and P M Garber (1992): “The private ECU: a currency floating on gossamer wings”, *NBER Working Papers*, no 4017.

Franke, G (1999): “The Bundesbank and the markets”, in *Fifty years of the Deutsche mark*, Oxford University Press, Oxford, pp 219–66.

Gallant, P (1988): *The eurobond market*, Woodhead-Faulkner, New York.

Ito, T (2004): “Promoting Asian basket currency (ABC) bonds”, in T Ito and Y-C Park (eds), *Developing Asian bond markets*, Asia Pacific Press.

Jiang, G and R McCauley (2004): "Asian local currency bond markets", *BIS Quarterly Review*, June, pp 67–79.

Jung, W, C Kim, S Lee and H Park (2002): "The creation of the ACU and its application to the bond market", in H G Choo and Y Wang (eds), *Currency union in East Asia*, Korean Institute for International Economic Policy, Seoul, pp 201–19.

Kenen, P B (2006): "Comment on 'The parallel currency approach to Asian monetary unification' by B. Eichengreen", in panel on Asian currency matters at the American Economic Association, Boston, Massachusetts, 7 January 2006, Princeton University (processed).

Kindleberger, C P (2000): "The politics of international money and world language", in *Comparative political economy: a retrospective*, MIT Press, Cambridge, Massachusetts.

McCauley, R and G Jiang (2004): "Diversifying with Asian local currency bonds", *BIS Quarterly Review*, September 2004, pp 51–66.

McCauley, R and E Remolona (2000): "Size and liquidity of government bond markets", *BIS Quarterly Review*, November, pp 52–8.

McCauley, R and S Yeaple (1994): "How lower Japanese asset prices affect Pacific financial markets", *Federal Reserve Bank of New York Quarterly Review*, vol 19, no 1, Spring, pp 15–33.

Mohanty, M S (2002): "Improving liquidity in government bond markets: what can be done?", in "The development of bond markets in emerging economies", *BIS Papers*, no 11, June, pp 49–80.

Mori, J, N Kinukawa, H Nukaya and M Hashimoto (2002): "Integration of East Asian economies and a step-by-step approach towards a currency basket regime", *IIMA Research Report No 2*, November.

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

Park, D and Y-C Park (2005): "Toward developing regional bond markets in East Asia", *Asian Economic Papers*, 3:2.

Plummer, M G and R W Click (2005): "Bond market development and integration in ASEAN", *International Journal of Finance and Economics*, 10, pp 133–42.

Williamson, J (1999): "The case for a common basket peg for East Asian currencies," in S Collignon, J Pisani-Ferry, and Y-C Park (eds), *Exchange rate policies in emerging Asian countries*, Routledge, London.