Regional Payment Systems: A Comparative Perspective on Europe and the Developing World

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A COMPARATIVE PERSPECTIVE ON EUROPE AND THE DEVELOPING WORLD[i]

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Abstract

The current global financial "non-system" is marked by instability. In the absence of global solutions, a series of regional arrangements of monetary cooperation have been emerging to cope with such instability. The paper focuses on regional payment systems as an initial step of regional monetary cooperation. In order to evaluate their potential contribution to increase macroeconomic stability of the member countries, we develop a typology of payments systems and systematically compare historic and present initiatives in Europe, Asia and Latin America with reference to the original Keynes Plan. We show that regional payment systems entail beneficial effects by reducing transaction costs of intra-regional trade, and by creating incentives for further macroeconomic cooperation. Their contribution to macroeconomic stabilization however depends on the specific design of the respective regional arrangement.

I. Introduction

The current global crisis has resurrected deep-rooted concerns about the functioning of the current international monetary "non-system". (Mateos y Lago et al., 2009). Not least in response to inherent global financial volatility, monetary and economic relations increasingly regionalised especially since the end of the Bretton Woods system. In this vein, south-south cooperation has increased significantly during the last decade, not only via increasing south-south trade[iii] but also in monetary and financial terms: Developing countries and emerging markets increasingly consider regional monetary cooperation as an alternative monetary policy option to cope with the vicissitudes of the volatile global economy.

Among the various dimensions of regional integration, efforts for monetary and financial cooperation can be observed in different parts of the world. They range from liquidity sharing mechanisms within the Chiang Mai initiative in South East Asia to nascent initiatives in Latin America that aim to establish new regional payments systems. While a growing literature on specific cases or comparative analysis exists, especially with regards to the European experience, as to the best of our knowledge, there is a lack of systemised literature on south-south regional monetary cooperation.[iv]

Within the small body of literature, some alternative ways to classify the highly diverse arrangements of regional monetary and financial cooperation can be mentioned: Ocampo (2006) proposes a simple division into: i) development financing, and ii) macroeconomic cooperation and connected financial mechanisms. UNCTAD (2007, chapter V) uses a three-level approach: i) regional cooperation for payment facilities and short-term financing; ii) regional cooperation for development financing (or long-term financing); and iii) exchange-rate arrangements and monetary unions. Edwards (1985) offers a classification of three groups of regional arrangements: regional payments agreements, agreements for balance of payments financing, and monetary unions. We follow this latter systematisation of Edwards (1985), who – as one of a few authors – explicitly includes regional payment systems in order to analyse regional payments agreements as one form of regional monetary cooperation and integration in contrast to balance of payments financing and monetary unions. We divide regional monetary cooperation schemes into regional payments systems, regional foreign exchange pooling, regional financial development initiatives and exchange rate coordination. When analysing their effectiveness in terms of smoothening volatility and sustaining growth, we link the four forms to specific effects: i) increased self-insurance against exogenous shocks through increased regional trade in regional payments systems; ii) increased provision of balance of payment finance in regional foreign exchange pooling; iii) the creation of a regional financial market as a public good that may add to increase investment financing in domestic currencies in order to prevent the destabilising effects of external capital inflows in regional financial market development initiatives; and iv) the avoidance of beggar-thy-neighbour policies by preventing competitive intra-regional exchange rate devaluations with their deflationary consequences for the economies of the whole region in regional exchange rate arrangements (see also UNCTAD 2011). In the following, we concentrate on regional payments systems as an initial form of regional monetary cooperation that aims at immunising a region against exogenous shocks by fostering intra-regional trade.

At the same time, the theoretical issues related to this subject are broader than the regional cooperation debate. Explicitly or not, regional payment systems are designed with reference to the so-called Keynes Plan. Keynes (1980) proposed the creation of an International Clearing Union (ICU) for the re-organisation of international trade and finance that was discussed in the negotiations previous to the Bretton Woods Conference in 1944 (see Keynes, 1980, Davidson, 1992/93 and 2002, and IMF, 1969).

In detail, the clearing union proposed by Keynes included registering and settling all international payments by using a virtual common unit of account – the *bancor* – for invoicing all these operations. The most important feature of this international currency was its uniquely fiduciary nature: it was not related to the quantity of gold or another good. Moreover, it was to be used only in international transactions among central banks. The most relevant part of the proposal was a mechanism for both deficit and surplus countries to adjust in order to prevent global imbalances. The idea was to share the burden of adjustment by taxing countries who had earned *bancors* in excess (i.e. in the form of reduced interest earnings for the *bancor* claims, which would result in reduced interest on the credit lines to deficit countries). If a country accumulated surpluses with the ICU, thereby accumulating *bancors*, and refused to adjust to greater import demand, it would be penalised.

As is well known, from this wide ranging approach, only the coordination of exchange rates was addressed by the Bretton Woods system, but not the equilibration of imbalances between surplus and deficit countries. Even so, the Keynes Plan still is subject to vivid academic debates[v] and, as emphasised here, some of its main ideas were (and are) applied on a regional level in different areas of the world, with rather distinctive results.

Our analysis shows that, more than mitigating trade imbalances, regional payment systems can have a positive but small beneficial effect on intra-regional trade volumes by reducing transactions costs related to the use of foreign currencies in regional trade. In order to directly address regional trade disequilibria, however, regional clearing mechanisms require a broader and long-term oriented regional macroeconomic cooperation as well as carefully designed adjustment mechanisms. In order to understand the logics and relevance of different kinds of regional payment systems of which only some include trade balancing mechanisms and other features, we provide a comparative analysis of different initiatives in different stages with diverse objectives.

The paper is organised in three sections following this introduction: Section II proposes a systematisation of common aspects and differences between regional payments systems by presenting a typology of such mechanisms. Section III revises the experience of five past and present cases of payments systems: the European Payments Union (EPU) of the post war period, the Latin American Integration Associations' Agreement on Reciprocal Payments and Credits (CPCR), the Asian Clearing Union (ACU), and finally two recently founded arrangements in Latin America, the System of Payments in Local Currency between Argentina and Brazil (SML), and the Unified System for Regional Compensation among ALBA members (SUCRE). Section IV concludes.

II. Regional payment systems: definitions and typology

Regional payment systems are international mechanisms designed to facilitate payments between residents of the participating countries. The advantage of this kind of mechanism is not difficult to understand: if a resident of a country, say Bolivia, wishes to buy a good produced in another country, say Nicaragua, the Bolivian resident has to find a way to pay for this good with a currency that is accepted by the Nicaraguan resident. This may be the Nicaraguan *córdoba*, or a major international reserve currency like the US dollar. In either case, the Bolivian importer has to assume the cost of obtaining a currency different from his/her own currency in order to pay for the Nicaraguan good. While costs for the individual importer may be small (especially for large enterprises), they increase at the aggregate level, depending on the specific funding conditions at the international financial market for the respective country at a certain moment.

Aiming at reducing transaction costs at the level of individual transactions, a regional payment system by definition allows firms in each of the participating countries to settle their transactions with firms in other member countries in their domestic currency.[vi]

According to Chang (2000: 3 p.), a reduction of foreign currency flows and associated transactions costs can be obtained mainly in two ways. First, the number of transactions is reduced to net final settlement at the end of the period, while transactions of equal value cancel out. Second, temporary liquidity is provided to the deficit countries' central banks by the surplus countries' counterparts, as they allow each other to cancel mutual obligations not immediately, but only at the end of a clearing period. In effect, an efficiently run regional payment system in this simple version may slightly improve the terms of trade for intra-regional trade transactions.

A closer look at past and present regional payment systems shows that a variety of arrangements exist which address the problem of transaction costs in regional trade with a range of different instruments. Thus, the effects of such systems in terms of reducing transaction costs have to be differentiated further since economic literature so far lacks a systematic definition and discussion of regional payment systems, in the following we propose a typology of such systems. This will then be applied to past and present regional payments systems in different regions of the world.

At the bank and importing/exporting firm level, the amount of cost reduction depends mainly on the costs of the currency exchange transactions in the foreign exchange market. These vary during time, depending on the country's credit conditions at the international market. Additionally, these costs vary for firms and banks depending on their size, their share in international trade and other criteria. The primary function of reducing transaction costs in intra-regional trade transactions requires the establishment of a clearing mechanism among the central banks of the participating countries, where trade-related payments are registered. Therefore, at the core of a regional trade-related payment system is the agreement between the member countries' central banks to temporarily extend credit to each other by settling the accumulated net differences periodically.

The degree to which regional payments systems can contribute to reducing transaction costs of intra-regional trade transactions at the aggregate level thus depends on three main criteria and the institutionalised mechanisms established between the involved central banks:

(a) *The difference between the gross and net values of trade transactions, and the length of the clearance period:* As a general rule, the greater the difference between the number and volume of gross and net transactions, and the longer the clearance period for net surpluses and deficits, the more effective a regional payment system can be in terms of reducing transactions costs in intra-regional trade (Chang, 2000). Additionally, temporary liquidity may rise through the provision of credit by central banks throughout the agreed clearance period.

(b) *The currency denomination of the final clearance, and settlement of surpluses and deficits between the central banks*: When final clearance and settlement between the central banks are conducted not only in international currencies but also (at least partially) in national currencies of the member countries, transaction costs diminish, because central banks do not need to obtain the equivalent volume of foreign currencies for this purpose.

(c) *Provision of credit beyond the clearance period*: Additional credit can be provided to deficit member countries through credit lines or swap arrangements on terms agreed between the member countries' central banks. Depending on the interest rate charged for these mutual credit lines, this can be more advantageous than financing conditions in financial markets.

Beyond the specific features of clearance, regional payment systems may also incorporate mechanisms for adjustment among deficit and surplus countries at the regional level. Strongly unbalanced intra-regional trade within a regional payment system rewards debtor countries with greater gains in terms of reduced transaction costs, especially when final net clearance in domestic currencies is allowed and/or the provision of credit beyond the clearance period is provided. The higher the intra-regional cumulative deficits, the smaller are the incentives for surplus countries to continue trading within the system. Regional payment systems, to be attractive to both surplus and deficit countries alike, require mechanisms to balance trade among its members. The main benefit expected from such regional adjustment mechanisms is the prevention of beggar-thy-neighbour policies, especially in periods of balance-of-payments stress of individual member countries. Further to this, deeper macroeconomic cooperation is required to effectively prevent unsustainable imbalances at the regional level, as the ongoing crisis of an even deeper monetary regional integration arrangement - the euro zone - shows.[vii]

Regional payment systems additionally can introduce a *unit of account*, which has two main functions:

(a) *A unit of account reduces transactions costs in multilateral clearing at the macroeconomic level*, as it reduces the number of intra-regional exchange rates to the bilateral exchange rates of each of the currencies towards the regional unit of account. The unit of account is usually fixed to an external key or reference currency. Nominal changes in the exchange rate of individual members' currencies need to be reflected precisely in the adjustment towards the unit of account in order to prevent misalignments against market-based intra-regional exchange rates and avoid trade distortion.

(b) *In a more sophisticated arrangement, the unit of account may emerge as an instrument for intra-regional exchange rate cooperation*, as it may provide a point of reference for regional coordination of exchange rates. It already delivers a common denominator against external currencies that can be used as a target for increasing harmonisation of real exchange rate fluctuations against an external currency or currency basket. Here, more significant gains in terms of increased intra-regional trade may be expected as a result of shielding intra-regional exchange rates from global currency instability through coordinated adjustment. Moreover, it may thus prepare grounds for deeper regional monetary cooperation (see also UNCTAD 2011, chapter II).

In conclusion, beyond the common and basic goal of transactions cost reduction of every payments system (by means of settling the external trade operations in domestic currencies), there is a range of additional tools and objectives that can also be attached to these schemes. The most common ones are temporary liquidity provision, final settlement in national currency, credit lines beyond the clearance period (all aiming at saving foreign reserves), or even some mechanisms to reduce the trade imbalances and create a unit of account (that could turn into a vehicle for exchange rate coordination). The extension of these "advanced" features of a payment system reveals the ambition level of each initiative. The first two columns in table 1 (see below) summarise the different objectives and tools of a regional payment system. The remaining columns apply this typology to the four cases analysed in the next section.

--- insert table 1 ----

III. Lessons from past and present experiences

The four examples selected, in chronological order, are: the European Payments Union (EPU), the Agreement on Reciprocal Payments and Credits of the Latin American Integration Association (CPCR-LAIA/ALADI), the Asian Clearing Union (ACU), the System of Payment in Local Currency (SML) between Argentina and Brazil, and the initiative to establish a Unified System for Regional Compensation (SUCRE) among some of the ALBA (the Bolivarian Alliance for the Peoples of Our America) member countries in Latin America.

A comparative analysis of these schemes shows that, beyond their specific context, due to regional differences and varying conditions, they represent different degrees of sophistication in their objectives and related instruments (Table 1). Since the benchmark of a "complete" payment system is the Keynes Plan, it is included as a point of reference here. The following comparative analysis highlights the contrast between regional initiatives and an international clearing union. Table 1 shows that the Keynes Plan incorporated the fullest range of instruments available to address imbalances and enhance trade. Subsequently set up arrangements on the regional level do not include all such instruments, partly because regional payment systems are confronted with different challenges than a global one. For example, creating a regional accounting unit in a multipolar monetary system incurs additional adjustment requirements compared to an international accounting unit since the currencies within the region still have to be adjusted to changing extra-regional exchange rates which would not be the case in an international arrangement. As such, none of the regionally implemented units of account is so far incorporated as a means of exchange rate coordination.

In the following sections, these schemes are presented based on the typology explained in the last section and presented in the Table 1. Each analysis also includes a brief assessment of the use of the schemes in intra-regional trade transactions in comparison with regional trade conducted outside each scheme, depending on availability of data.

III.1. The European Payments Union (EPU)

The European Payments Union (EPU), which was created in 1950 and was replaced by the European Monetary Agreement in 1958, is regarded as a role model for fostering regional trade. In this context, the EPU’s objectives were to develop convertibility of the European currencies at the regional level, liberalise intra-European trade, and multi-lateralise existing bilateral trade arrangements. The founding members were Austria, Belgium, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

EPU performed almost the full range of functions of regional payment systems. This included a reduction of transaction costs in regional trade by enabling trade payments to be settled in domestic currency (item 1 in Table 1). Hence, foreign exchange requirements were limited to the minimum amount necessary due to multilateral clearing. EPU included a short-term liquidity provision (2a) during the settlement period of one month (2b) and additional longer term credit provision exceeding the payment system’s internal clearance periods (2c). In addition, it had strong trade adjustment incentives through gold quotas (3) and a regional unit of account that was used for accounting purposes only (4a). Though explicitly not designed to provide a common European currency, this unit of account can be regarded as the first stage of what 30 years later became the European Currency Unit (ECU) in 1981 (4b).

The design of the EPU was strongly linked to the unique conditions of the Bretton Woods system at the time of its foundation. It was set up in a world of fixed exchange rates, non-convertibility of all currencies other than the dollar and strictly limited private capital flows and is therefore probably the only regional payment system that did not need to create adjustment mechanisms for extra-regional exchange rate adjustments. In addition, it is important to note that EPU was not established without difficulties: negotiations to reach agreement on the incentive structure to reduce intra-regional trade imbalances took a long time, and the EPU underwent a series of modifications during its existence.[viii]

The main benefit of the EPU was that it ended bilateralism in intra-regional trade by introducing a multilateral clearing system: a regional unit of account was set up at par to 1/35 ounces of gold (equal to the gold conversion rate of the dollar but independent of it). The EPU's unit of account was used only for multilateral clearance of regional transactions, and each country set a parity of its own currency with this unit of account.

The EPU's accounts were held at the Bank for International Settlement (BIS), which acted as its financial agent and also its clearing house. The settlement period was one month, after which the participating countries reported their balances with each of the other countries to the BIS.

The EPU had a limited mechanism to balance trade.[ix] Following its inception, each country received a quota of 15 per cent of its total trade with the EPU. As long as a country's net debt was less than 20 per cent of its quota, it was financed by credit, so that the country did not need to pay. If a country's debt reached 20 per cent of the quota, that country had to settle 20 per cent of the quota in gold. Debts amounting to 40, 60 and 80 per cent of quota were required to settle in an equal percentage of shares in gold or dollars. If a country exceeded its entire quota, it was required to make its payments entirely in gold.[x] Cumulative surpluses were settled in a similar way as deficits but at different percentage shares. Until its quota was exceeded, a surplus country would receive gold, but amounting to only a maximum of 50 per cent of its cumulative net surplus position. In addition, claims were converted into commodities or hard currency only partially and with a delay.

Despite inherent incentives to avoid excessively large surpluses, countries with a net export surplus to the region benefited from the EPU in three ways (De Macedo and Eichengreen, 2001). First, surplus countries had access to gold, rather than having to use internationally unconvertible neighbour countries' currencies in return for their exports. Creditors were given more gold than debtor countries from a pool of $350 million, which was initially financed by the Marshall Plan. Second, financial assistance was provided, conditional upon economic adjustment by the debtor countries, thus limiting any potential misuse of the system. Third, trade liberalisation was a requirement for EPU membership. Reducing trade barriers by up to 75 per cent was required over the course of EPU's existence, which resulted in trade gains, particularly for the internationally more competitive surplus countries.

The strong orientation towards trade liberalisation within Europe was a crucial additional element of the EPU's success in increasing trade, as it prevented the countries from reverting to trade-related beggar-thy-neighbour policies in order to enhance economic growth.

The volume of European trade increased considerably during the existence of the EPU, partly as a result of trade liberalisation agreements. According to De Macedo and Eichengreen, 2001, "although both intra-European trade and trade with the rest of the world expanded more quickly than European production in the EPU years, the spurt in European trade was coincident with the inauguration of the EPU." [xi]

Apart from increasing intra-European trade, the EPU contributed significantly to improving Europe's terms of trade. It functioned like a common external tariff scheme: demand for extra-regional goods declined as the prices of intra-European goods became more favourable due to the intra-regional convertibility scheme and the credits provided. While this rapid expansion of intra-European trade fuelled productivity and rising income levels, it was crucial for the economic development of Europe to be able to build on several elements for economic growth. At the national level, the EPU counted on a strong commitment to an agreement on income distribution. Labour and management in the member countries bargained real wages below or at the level of productivity increases in return for productive reinvestment of profits (Eichengreen, 1993: 121).

Ultimately, the EPU's exit barriers were too high to not commit strongly to the intra-European payment system. However, it is important to note that during its existence, the EPU had to contend with a number of challenging crisis periods (for details, see Bührer, 1997: 206; and Eichengreen, 2006: 83).[xii] which was only possible due to its highly favourable incentive structure. "What helped to overcome these was the fact that the EPU proved to be very useful to its members as it not only provided credits for importing but in this way also allowed members to export." (Dickmann, 1997: 195).

III.2. The Latin American Agreement on Reciprocal Payments and Credits (CPCR- LAIA)

The Agreement on Reciprocal Payments and Credits (CPCR – Convenio de Pagos y Créditos Recíprocos), which was established in 1966, was the first mechanism of its kind in Latin America. It was the result of a long process of negotiations and studies, at least since the 1950s, under the aegis of the Economic Commission for Latin America and Caribbean (ECLAC).[xiii] This agreement, under the auspices of the Latin American Integration Association (LAIA/ALADI – Asociación Latinoamericana de Integración),[xiv] has 12 of LAIA's 13 member countries as signatories: Argentina, the Bolivarian Republic of Venezuela, Bolivia, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, Mexico, Paraguay, Peru and Uruguay.

This payment system serves to reduce transaction costs (item 1 in Table 1) and provides temporary liquidity during a clearance period of four months (2a). The central banks agree on the amounts and conditions of the temporarily provided credit lines, register the operations and assume the risks of delayed payments during the clearance period (see below). At the end of that period, the net amount of all credits is settled multilaterally in dollars. The CPCR does not provide credit mechanisms beyond this period, maintains the hard currency for final clearing among central banks, and does not include a common unit of account.

Even without replacing the dollar as the currency for final clearance (2b), the CPCR mechanism has been able to reduce transaction costs in intra-regional trade. In particular, it was able to help overcome the obstacles to trade expansion resulting from the high costs of financing in dollars during the so-called debt crisis in Latin America in the 1980s.

However, since the 1990s the use and effectiveness of the CPCR has declined significantly, in a two-folded process (Figure 1). First, the CPCR has not been able to keep up with the expansion of intra-regional trade since the mid-1990s. For example, intra-regional trade within the free trade agreement of MERCOSUR was conducted without making use of the CPCR. Since then, the value of operations channelled through the CPCR has steadily declined, reaching its lowest level in 2003, at $700 million. While the share of intra-regional trade channelled through this mechanism amounted to an average of almost 90 per cent of total regional trade transactions in the 1980s, it has remained below 10 per cent since the mid-1990s. Second, there has been a significant increase in pre-payments (i.e. voluntary settlement of claims before the maturity date of four months). These operations rose from less than 10 per cent of the total at the end of the 1980s to more than 90 per cent in the mid-1990s, with only a short reduction in the period 2001–2004.

As a consequence of these developments, the CPCR's usefulness and its contribution to intra-regional trade creation by reduction of trade-related transaction costs, has continuously declined. Based on the LAIA's calculations of the benefits derived from CPCR (i.e. the percentage difference between the total value of operations channelled in each year and the amount of dollars effectively disbursed), the high values of the 1980s (of 70–80 per cent) fell to around 25 per cent in 2003. Since 2006, this share has been lower than 5 per cent.

The underlying reasons for the declining use of the CPCR relate to a series of rather specific problems within the system which also are currently debated within the institution (LAIA, 2009) and should be taken into account in an eventual design of a new payment system in Latin America.

The first reason involves the possibilities and conditions for choosing the mechanism to channel payments. During the 1980s, faced with severe balance-of-payments problems, the majority of CPCR-member central banks made it mandatory to channel payments for intra-regional trade transactions through the CPCR, until 1992. Since then, however, while still in accordance with the general rules of the Agreement, the countries started to bypass the CPCR through their own domestic regulations. Among the motivations for this increasingly cautious stance, was the reluctance of the central banks to assume risks associated with intra-regional trade transactions arising from the set of guarantees assumed under the Agreement by the central banks for convertibility, transferability and reimbursement for transactions provided by the system.[xv]

Another reason was that the increase in pre-payments caused a steady decline in the comparative advantage of the CPCR in the settlement of intra-regional trade transactions in terms of its providing temporary liquidity by central banks. A claim is settled in advance only if there are no better alternatives available for one or both sides of the contract. The interest rate on the bilateral credits of the agreement is fixed as the average of the four-month London inter-bank offer rate (LIBOR) settled during the first three months and half of each compensation period plus one percentage point. If this rate is lower than what a creditor country may profit in alternative investments of its foreign exchange reserves, it is interested in receiving payment in advance, thus creating a potential disincentive for net exporting countries. If, at the same time, this interest rate is higher than that offered by other financing sources, it too provides a greater incentive for pre-payment by a debtor country.

Thus advance payments within the CPCR started to rise at the beginning of the 1990s, when Latin America once again became an increasingly attractive destination for private capital inflows (Figure 1). Later, between 1999 and 2003, when external financing conditions deteriorated once more, the percentage of pre-payments fell slightly, but increased again with the resurgence of capital flows during the global boom period. These trends suggest a correlation between the attractiveness of payments through the CPCR and the absence of private external financing.

Beyond this, the incentives to use the CPCR developed asymmetrically among the members, since more and more diverging creditor and debtor positions developed between the largest member countries. The bulk of the operations currently is composed by Venezuelan imports and Brazilian exports of engineering services associated with large infrastructure projects, thus involving only a small number of transactions. This too has had the effect of diminishing the CPCR’s role in reducing transactions costs, beyond unequal distribution of its use by members. Thus there seems to be room to improve the incentive mechanisms and institutional arrangement within this LAIA payment system. Certainly a payment system better suited to the regional context could have helped the expansion of intra-regional trade since the 1990s.[xvi]

III.3. The Asian Clearing Union (ACU)

The Asian Clearing Union (ACU), founded in 1974, offers a clearance period with provision of short-term liquidity (Table 1, item 2a) and the provision of swap lines for deficit countries beyond clearance (2c). It also provides a unit of account for the factoring of transactions channelled through the system (3a).

ACU was the outcome of an initiative of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) in order to foster regional cooperation between the countries concerned, namely Bangladesh, Bhutan (since 1999), India, the Islamic Republic of Iran, Maldives (since 2009), Myanmar, Nepal, Pakistan and Sri Lanka. ACU itself describes its objectives as follows: "To facilitate settlement, on a multilateral basis, of payments for current international transactions; to promote the use of participants' currencies in current transactions; to promote monetary cooperation among the participants and closer relations among the banking systems so as to expand trade and economic activity among the countries of the ESCAP region; and to provide for currency swap arrangement among the participants."[xvii] Since 1985, the use of the ACU clearing facility by member countries is optional.

A regional unit of account, the Asian Monetary Unit (AMU), has been created for the settlement of ACU transactions. For many years market participants invoiced and settled intra-regional payments in local currencies, but since the beginning of 1996, ACU is implemented as a multi-currency settlement system through which participants may also settle their accounts in dollars or euros, and AMU is referred to as ACU dollar or ACU euro. As the main purpose of the ACU is to provide a common unit of account, the term ACU dollar is specifically used to identify the use of ACU transactions as distinct from transactions in dollars. Otherwise there is no distinction value-wise between the ACU dollar and the dollar. The same applies to the ACU euro. AMU is kept equivalent to one dollar and one euro respectively. Intra-regional exchange rates with the ACU dollar/ACU euro are calculated based on daily SDR cross rates as published by the IMF.

Provision of liquidity by mutual central bank credits during the settlement period is realised in ACU. The settlement period is two months, after which interest payments and debtor and creditor positions are netted out. Within that period, trade between ACU member countries does not require any payment and there are no restrictions on volumes, or kinds of goods and services traded. The basis of the ACU operating mechanism is the ACU dollar and ACU euro accounts of the participating countries' banks with the correspondent banks in other participating countries (ACU, 2009: 6). Out of these accounts, only the net surpluses and deficits are required to be settled by the central banks in the countries concerned. Authorised banks settle commercial and other eligible transactions similar to usual foreign exchange transactions.

The mechanism for inducing timely payments is through penalty fees or the threat of possible expulsion from the ACU. Delayed payments are subject to fines amounting to the higher of either the interest of 1 per cent per annum above the rate for the relevant settlement period(s) or 1 per cent per annum over the rate applicable on the day of default. In case a participant fails to pay within 15 days upon notification and no agreement can be reached between the partners involved in the pending transaction within seven days, the respective country is expelled from ACU until payments have been made. According to the ACU, no partner country has ever defaulted so far, probably due to its strong enforcement mechanism.

The ACU contains a swap facility for debtor countries beyond the clearing period: any participant in net deficit at the end of a settlement period is eligible for this swap facility. An eligible participant is entitled to the swap facility from every other participant up to 20 per cent of the average gross payments made by it through ACU to other participants during the three previous calendar years. The interest rate charged on drawing on the swap facility is derived from the dollar or euro two-month LIBOR declared by the British Bankers' Association.

According to ACU, the regional payment and clearing system has contributed to a rapid expansion of trade, particularly in recent years: In 2007, transactions amounted to $15,830.5 million, 31.4 percent more than the preceding year. On a monthly basis, the average transactions stood at $1,319.2 million compared to USD 1,004.2 million in the preceding year. India, I.R. of Iran, Sri Lanka, Bangladesh and Pakistan account for the bulk of transactions.[xviii] Payment of a large share of intra-regional trade is being channelled through ACU, also in previous years (see also Tripathi, 2010: 106 ff., 150 f.).

III.4. The payments system in local currencies between Argentina and Brazil (SML)

The System of Payments in Local Currencies (SML – Sistema de Pagos en Moneda Local) between Argentina and Brazil started its operations in October 2008. With reference to the typology here used, this is a simple payment system which uses the national currency for trade factorising and clearing of bilateral trade operations between an importer, an exporter and commercial banks (item 1 in Table 1). Any of the additional and more sophisticated features of a regional payments system is present (so far) and, hence, it is designed to overcome only the transactions costs associated with international trade operations. Use of the SML is voluntary in both member countries.

Despite the modest ambition, an explicit goal of the mechanism is to develop the foreign exchange market between these two countries. Thus, the exchange rate between the Argentinean *peso* and the Brazilian *real* is determined on a daily basis, triangulated through the respective dollar exchange rates. Based on this daily rate, the values of export and import transactions in the two countries are converted into national currencies, to be paid by importers to their central banks and received by exporters from their central banks. These payments are made like any other international transactions, by local banks previously authorised to transfer the operations, which means that credits can be granted in local currencies. Each operation between the central banks via the SML is cleared through the international banking system in New York. The maximum period for this clearing is three days, but it usually takes just 24 hours. Thus there is no clearing period which would enable a saving of foreign exchange reserves by accumulating and final clearing of net positions between the monetary authorities.

As the mechanism has been established too recently, an evaluation of its use and effectiveness can only be very preliminary. The mechanism started operating with a limited number of operations and trade volume. In the 33 months up to June 2011, a total of 7,069 transactions were channelled through the SML, of which 98 per cent were Brazilian exports. The amount channelled was equivalent to 3 per cent of bilateral trade: 2.54 billion *reais* (of which 99 per cent were Brazilian sales). The SML is being used more and more, with a continuous increase in the number of operations and share in bilateral trade (even if concentrated on one side of the balance[xix]). From 2010 on, monthly records show that more than 4 per cent of total trade between the two countries was channelled through the SML, reaching an apex of 5.6% in June of that year (figure 2). In addition, satisfaction with the use of the system seems to be high: 65 per cent of companies have used it more than once, and the number of complaints seems to be low.[xx]

Another aspect of the SML is related to the kind of enterprises using the mechanism. Being voluntary, by definition it should offer advantages over traditional payment settlement in international transactions. The SML is specially designed to cater to the specific needs of small and medium-sized enterprises (SMEs), for which access to the foreign exchange market is restricted due to high transactions costs relative to their small size. Unlike the larger companies in both countries, for these smaller firms the option to pay and receive in local currency represents significant cost reductions.

At the same time, the SML could gain importance by expanding regionally, especially to include other members of MERCOSUR. Indeed, Uruguay is expected to enter into a test phase with the mechanism, at least for bilateral trade operations with Brazil. Regarding Paraguay, some technical challenges persist, mainly involving computerisation of the domestic payment system. Once the difficulties of initial implementation between Argentina and Brazil are overcome, extending the SML to other economies should become easier.

In terms of lessons in the design of payment systems, probably the main contribution of this new initiative is its effectiveness in addressing specific transaction costs in foreign exchange for smaller firms. The system has a simple and transparent structure with a clear set of rules and incentives. In its short period of implementation, SML has shown that a step-by-step approach may be beneficial as long as it is continuously and transparently adapted to international financial conditions and addresses specific problems linked to the transaction costs inherent to accessing non-domestic currency for intra-regional trade.

III.5. The unified system for regional compensation SUCRE between ALBA members

Most recently, in April 2009, the member countries of the Bolivarian Alliance for the Peoples of Our America (ALBA) discussed the idea of creating a virtual currency to be used among central banks as an invoice currency for intra-regional trade transactions. The final outcome was the so-called Unified System for Regional Compensation (Sistema Único de Compensación Regional) – or SUCRE initiative – which was approved in April 2009[xxi].

In its initial stages, the SUCRE initiative aims at reducing transaction costs in intra-regional trade (item 1 in Table 1), and is linked to the saving of foreign exchange by allowing delayed settlement of trade transactions (2a). The mechanism offers the option of settling final net payments of net trade surpluses and deficits in a domestic or international currency (2b as option). The establishment of a regional credit fund (2c) and adjustment mechanisms to balance intra-regional trade channelled through the system (3) are envisaged, but not yet operational.

A key feature of the SUCRE proposal is that it involves the creation of a regional unit of account, the *sucre*, to replace the dollar for invoicing regional transactions.[xxii] Its use does not involve physical emission of *sucres*, and is restricted to invoicing operations relative to intra-regional trade payments only at the central bank level. The *sucre* is designed to be a common unit with its value derived from a basket of currencies of the member countries weighted according to their relative economic size. As in the ACU and the SML, the *sucre* is a voluntary payment system. Central banks can decide whether to use the *sucre* mechanism and unit of account for invoicing trade transactions, or channel invoicing of exports and imports in another currency, usually the US dollar in international trade transactions.

An additional feature of the system, rather atypical for payment systems, is that, in its preliminary form, countries can select which products will be traded using this system of payments. This is owed to the fact that a primary objective of the SUCRE initiative is to diversify the export structure of the countries by direct policy intervention, reducing their strong dependency on commodity exports.

If a country decides to use the *sucre* as a unit of account for a certain product in intra-regional trade, the Central Unit of Compensation (CCC – Cámara Central de Compensación) assigns an initial amount of *sucres* to it. The CCC is also the entity responsible for the periodic compensation and liquidation of payments in *sucres* between the central banks of the member countries.

Up to today, the system seems to remain in its initial steps, having realised during 2010 and 2011 a small number of bilateral operations involving foodstuff among Cuba, Ecuador and Venezuela.[xxiii]

As it is still in its very initial steps of foundation and use, the SUCRE initiative exemplifies how important a clear regional understanding of the objective of the creation of a regional currency unit is (see section II): following the typology of Table 1, the *sucre* can either remain a virtual unit of account (4.a) or a currency basket that aims at more ambitious regional currency cooperation (4.c), as foreseen by at least part of the participating actors (see Páez Pérez, 2010). If the aim is to remain a unit of account, the only relevant mechanism would be the precise reflection of current nominal exchange rates of the participating currencies towards other key currencies, i.e. the US dollar, in the daily definitions of the exchange rate towards the regional unit of account, in order to maintain the incentive for all participants to invoice their mutual trade in *sucres*. Yet, if the aim would be to gradually progress towards a regional currency in the long term in the sense of (4.b) in Table 1, a carefully designed mechanism of real intra-regional exchange rate adjustment would be required, together with increasingly coordinated macroeconomic policies in order to stabilise intra-regional nominal and real exchange rates. This would involve a broadening range of policies, regarding monetary, fiscal and wage policies, which in the best case would build up to a harmonisation of the regional macroeconomic framework towards an economic policy setting supportive of domestic and regional investment and growth.

IV. Conclusions

The comparative analysis of past and present trade-related regional payment systems presented in this paper shows a variety of schemes in different parts of the world. The general reference model for most of the initiatives is the International Clearing Union, proposed by Keynes during the negotiations leading up to the Bretton Woods system. Yet, the latter addressed the international level of monetary cooperation: Keynes' proposal sought to overcome a number of problems with the international monetary system at that time, which again are of great relevance today, such as the prevention of global imbalances due to asymmetric adjustment costs assigned to debtor economies, and the problems for international trade associated with misaligned exchange rates.

In contrast, payment systems established at the regional level can only address a very small part of these problems, as they do not include a reform of the global monetary system. As such, past and present regional payment systems in Europe, Asia and Latin America focus on stabilising and enhancing intra-regional trade through regional clearance of intra-regional trade transactions. A comparison of these regional arrangements shows that two elements are common to most of them: first, they offer the possibility of making transactions in local instead of international currencies between importers and exporters and correspondent banks; and second, they provide temporary liquidity during a determined clearance period whereby the participating central banks mutually offer credit by delaying final settlement of net deficits and net surpluses to the end of that period.

The European Payments Union (EPU) is an example of a system that puts great emphasis on reducing transactions costs in intra-regional trade by saving foreign exchange reserves. During the 1950s, EPU was a response to the specific circumstances of stiff financing conditions prevailing in the post-war period when it was founded. There was no intention of creating a regional currency in this period. Rather, the idea was to provide an accounting mechanism. The system was created in the context of globally fixed exchange rates, where additional intra-regional fixing of currencies was not needed. However, the EPU served as the first step in a process that ultimately led to the creation of the euro and to European monetary integration after the breakdown of the Bretton Woods system of fixed exchange rates.

In Latin America, the reciprocal payments agreement of the Latin American Integration Association (CPCR-LAIA) witnessed its most active period during the so-called debt crisis in the 1980s, when it became imperative for countries to save foreign exchange reserves due to dramatically increased borrowing costs. Indeed it was very effective in terms of channelling most of the intra-regional trade-related payments during that period. Yet, due to intense competition among the member countries that were all net debtors vis-à-vis the rest of the world, even intra-regional surplus economies faced payment pressures from international creditors. Thus, within the CPCR mechanism no solution for additional provision of credits beyond the clearing period, or final settlement in local instead of international currencies, could be developed. In the following decades, when the absence of international capital flows – including trade financing flows – was no longer a problem in the region, the mechanism lost momentum.

In contrast, the long standing Asian Clearing Union (ACU) which basically involves India and its neighbouring countries, adapted to changes in its member countries' stocks of foreign exchange reserves and international trade with the introduction of a multi-currency standard and by offering members the possibility to invoice and settle payments in domestic or international currency. This seems to have increased the effectiveness of the mechanism in terms of the volume of transactions channeled through it over the past few years. At the same time, there is no sign that the ACU mechanism is intended to serve as a basis for further monetary cooperation within the region.

The recently founded payment system in local currency established between Argentina and Brazil (SML) is focused on addressing trade facilitation on a small scale and with a low level of ambition. It focuses just on the transactions costs reduction; covers (so far) a very small share of bilateral trade between Brazil and Argentina and does not involve liquidity creation. Even on this small scale, the system seems to be an important tool for trade facilitation of small and medium enterprises and tries to foster an incipient exchange market for the currencies of the countries involved. Even without dealing with more structural questions, the effectiveness of SML in addressing specific transaction costs in foreign exchange signs a more productive path for a regional payment system in the current circumstances – especially the lack of macroeconomic policy coordination – of Latin American economies.

In contrast, the also recently founded system for regional compensation (SUCRE) with Cuba, Ecuador and Venezuela as core members aims at creating a currency unit which use goes beyond intra-regional trade transactions. It aims at decoupling from the US dollar as the invoicing currency for intra-regional trade as the member countries perceive the US dollar to be a destabilizing force in the region. Yet, for the time being, its mechanism provides a simple unit of account for intra-regional trade transactions of a subset of products between two of the countries. Its ultimate objective remains opaque. It is unclear if the major aim of the initiative is to create a regional unit of account for increasing trade volumes, reducing transaction costs in intra-regional trade and diversifying intra-regional trade by giving preference to certain products like food products, or if it is to build up a common regional currency. In the case of the latter, we conclude from our analysis that the more a region seeks to move into the direction of regional monetary cooperation the more required would be adjustment mechanisms in the unit of account in order to progress towards this goal. This would include first an adequate adjustment mechanism for the regional unit of account, second a regional mechanism to balance intra-regional trade, and third and most importantly, regional macroeconomic cooperation. The case of the current euro crisis shows that even a common currency cannot circumvent the necessity of intensive and broad ranging political cooperation to ensure a beneficial regional cooperation arrangement.

A general lesson to be drawn from our typology of regional payment systems together with the comparative analysis of past and current regional payments schemes is that the likeliest outcome of a well-functioning regional payment system is the reduction of transaction costs associated with the use of foreign (read extra-regional) currency in regional trade transactions. This reduction however depends first on the volume of regional trade flows, the difference between gross and net values of regional trade transactions, the length of the clearance period, the currency that is used for final clearance (local or foreign currency), the implementation of additional elements, such as credit provision between the member countries beyond the clearance period, and it needs to account for the costs of acquiring and holding foreign exchange for trade transactions for the respective country, and the trading firms.

Second, regional trade imbalances seem to play an important role which, in order to be more effective in terms of increasing intra-regional trade volumes, should be addressed within the scope of a regional payment system. Such a coordinated adjustment between deficit and surplus countries requires a careful design of incentives for both surplus and deficit countries to use the regional payment system. Otherwise, disincentives for surplus countries to participate may have the potential to easily endanger the survival of the system as a whole.

Third, a regional currency unit seems to facilitate the reduction of transaction costs by providing a unit of account for clearance purposes. Introducing a unit of account with a regional payment system may further serve a more long-term oriented goal of establishing an instrument for regional exchange rate cooperation. Yet, especially in the context of an internationally uncoordinated exchange rate system, immediate and smooth adjustment of nominal and real exchange rate changes of individual member currencies have to be reflected in relation to the regional unit of account. This relates to changes regarding the intra-regional, as much as extra-regional currencies – depending on the final objective of the payments systems' usage of its unit of account.

In view also of the analysis of these five cases of regional payments systems in Europe, Asia and Latin America, we conclude that payments systems have the potential to be an initial step on the long and sometimes winding road towards deeper monetary and overall macroeconomic coordination and a common macroeconomic regime oriented towards economic growth and employment. Yet, to indeed serve as a beneficial step towards a more stable macroeconomic development, the proposed systematisation of regional payment systems presented in this paper shows that first, such arrangements need to adapt to changing circumstances and preferences over; second, they need to provide adjustment mechanisms that provide for incentives for surplus countries, too; and third, they require regional macroeconomic policy cooperation that goes beyond regional monetary policy considerations to prevent regional imbalances from disrupting the arrangement. Despite being rather small steps of regional trade enhancement, regional payment systems – depending on the context conditions summarised above – may provide a step towards a regionally coordinated growth-enhancing economic environment. At the very least, the member countries are provided with the possibility of acquiring experience of regional macroeconomic policy cooperation.

The current euro crisis clearly shows that, in order to be beneficial in terms of macroeconomic stability and growth for all member countries, economic policy coordination and harmonisation should go far beyond fiscal coordination, including mechanisms for coordinated wage setting and prevention of large intra-regional imbalances, which requires very close political cooperation. Yet, this does not mean in our view that other areas of the world should refrain from regional cooperation mechanisms. Rather, our analysis shows that in consequence of clearly defined goals and properly established mechanisms, such regional cooperation schemes may provide economic gains and a learning field in a globally unstable context for future and deeper cooperation at the regional level.

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Notes

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[i] This paper is based on a chapter of the UNCTAD study on “Regional Monetary Cooperation and Growth-Enhancing policies: The New Challenges For Latin America and the Caribbean”, forthcoming 2011, which was elaborated together with Sonia Boffa and Heiner Flassbeck from UNCTAD to whom we address our special thanks for their valuable contributions and comments on this topic.

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[iii] South-south trade has been growing constantly, from 11 per cent of world trade in 1995 to 15 per cent in 2007 (UNCTAD 2009).

[iv] See for systematised approaches to regional monetary cooperation and integration between developing countries and emerging markets for example Cohen 2004, Chap. 7; Bénassy-Quéré/Coeuré 2005; Ocampo 2006; Fritz/Metzger 2006; Fritz/Mühlich 2010.

[v] Due to the striking parallels to the current economic situation of global imbalances and the problem of unilateral adjustment costs for debtor economies, the Keynes Plan is currently experiencing a prominent revival by authors like Paul Davidson 2009. For a critical analysis of additional elements of extended credit lines within the proposed arrangement with regards to increasing rather than reducing imbalances between surplus and deficit countries, see also Ponsot, 2010.

[vi] The transaction is realised as follows: when there is agreement between the central bank or the exporter in country A and the central bank or the importer in country B to channel a trade transaction through a payment system, the importer in country B will pay in currency B to central bank B while the exporter in country A will be paid in currency A by central bank A. These payments are frequently made through commercial banks, at the time of the goods’ boarding, and the buyer and producer pay and are paid, respectively, in their own currencies, using their own domestic banking systems.

[vii] Here, we refer to the fact that even if a lack of fiscal soundness may play a role in some EU member countries, the key problem is the lack of coordination of real wage levels and, subsequently, increasing external deficits and surpluses within the euro region due to differing levels of competitiveness (see Flassbeck/Spiecker, 2010).

[viii] For an extensive overview of regional negotiations of the EPU and its reforms, see, for example, Bührer, 1997: 189.

[ix] For a detailed description, see de Macedo and Eichengreen, 2001; Bührer, 1997: 195; and Eichengreen, 1993.

[x] Additional credits were also approved by EPU's Managing Board. If a country exceeded its quota, the Managing Board met to advise that country on adopting corrective policies. The Board comprised a group of financial experts who advised EPU and reported to the Council of the Organisation for Economic Co-operation.

[xi] This is evident from the fact that intra-European trade increased from $10 billion in 1950 to $23 billion in 1959, while imports from North America grew more slowly, from $4 billion to $6 billion. At the same time, credit expansion under the EPU fuelled intra-regional trade by reducing specific trade-related transaction costs through the use of extra-regional currencies in intra-regional trade (ibid.): "Participating countries had $46 billion of surpluses and deficits against one another during the EPU years. Nearly half ($20 billion) was cancelled multilaterally. Another quarter ($12.6 billion) was cancelled inter-temporally, as countries ran deficits in one month, financing them wholly or partially with credit, and ran offsetting surpluses in subsequent months, cancelling their previous position. Settlement in gold and dollars was limited to most of the remaining quarter ($10.7 billion). Thus, EPU reduced settlement in gold and dollars by more than 75 per cent compared to what would have been required under strict bilateralism."

[xii] Such crises gave rise to the first steps towards full convertibility of the European currencies that was finally achieved with the creation of the European Monetary Agreement (EMA) in 1958, including a European Fund. EMA was designed to foster multilateral trade and currency convertibility as the first step in mutual consultation and regional cooperation. Its core institution was the European Fund, which provided non-automatic short-term liquidity to member countries in times of balance-of-payments crises in order to prevent them from implementing trade-distorting measures. The European fund led to the creation of the European Monetary System and finally to the euro.

[xiii] Probably the first reference to this subject was the report entitled 'Compensación Multilateral de Pagos Internationales' en America Latina (CEPAL, 1949), prepared by the IMF. On these debates and the funding Agreement, see also Aragão, 1984; and Ocampo, 1984.

[xiv] For the official source of data and documents, see: http://www.aladi.org (access February 2010).

[xv] As the LAIA secretariat itself has stated: "… the fact that the Central Banks assume the credit risks involved in intra-regional trade transactions by granting a reimbursement guarantee to each transaction greatly stimulated the use of the system by exporters and by commercial banks since its initiation in 1968. From the 1990s onwards, institutional changes with respect to objectives and aims of the members' central banks turned out to be 'problematic' for the majority of the Central Banks, due to their duty to provide reimbursement guarantees" (LAIA, 2009: 11).

[xvi] Recently, a series of studies and discussions have been undertaken by the LAIA in order to "relaunch" the CPCR, including a meeting in Montevideo in April 2009 for this purpose. Documents and presentations are available at: http://www.aladi.org/nsfaladi/reuniones.nsf/PConvenio (access February 2010).

[xvii] See official website of the ACU at http:// www.asianclearingunion.org (access February 2010).

[xviii] See official website of the ACU at http:// www.asianclearingunion.org (access February 2010).

[xix] Total trade channelled through the SML system since its start is equal to 5 per cent of total shipments from Brazil to Argentina and less than 0.05 per cent of transactions in the opposite direction. There is no information available to explain the concentration of the movement in one direction. One reason may be the strong appreciation of the Brazilian real (against the dollar) during this period, which increased incentives for Brazilian exporters to accept export earnings in domestic currency.

[xx] Information provided by experts involved in the operation of the SML.

[xxi] It has been approved by ALBA member States, but ratification is still not completed. So far, the Bolivarian Republic of Venezuela, Cuba, Ecuador and Bolivia have ratified the initiative.

[xxii] The *sucre* is intended to be used only by selected ALBA member countries (the Bolivarian Republic of Venezuela, Bolivia, Cuba, Ecuador, Honduras and Nicaragua), with the exception of three CARICOM-ALBA member countries: Antigua and Barbuda, Dominica and Saint Vincent and the Grenadines. For these latter economies, the use of the *sucre* for the moment is not foreseen, as they are already members of the Eastern Caribbean Currency Union (ECCU) which uses the East Caribbean dollar.

[xxiii] According to the official website of the SUCRE initiative, "… the negotiated amount is at 47 million *sucres*, further operations are pending for 97 million." URL: http://www.sucrealba.org/index.php?q=content/se-prev%C3%A9-aumento-de-las-operaciones-realizadas-con-el-sucre-para-segundo-semestre-de-2011.

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