“THE ADOPTION OF THE EURO, CHOICE OF CURRENCY REGIME AND INTEGRATION OF PAYMENT SYSTEMS”

Three Papers by
Michael C. Bonello
Kari Kemppainen and Sinikka Salo
George M von Furstenberg

Introduction
by Morten Balling

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INTRODUCTION

By Morten Balling

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On May 4–5, 2006 SUERF and the Central Bank of Malta jointly organized a seminar "The Adoption of the Euro in the New Member States: Challenges and Vulnerabilities on the Last Stretch." This SUERF Study contains three important contributions to the Malta Seminar

Michael C. Bonello, Governor, Central Bank of Malta, presents in his keynote speech an overview of benefits and costs of euro adoption in the New Member States. He explains the importance of fiscal consolidation aiming at reducing deficit and debt levels to at least comply with the Maastricht criteria. The mandatory period in which a country participates in ERM II is perceived as a testing period, and in the current global environment it is really a challenge for the New Member States to satisfy the convergence criteria. The Governor concludes by stressing that in the examination that follows a country's request for a convergence report due consideration should be given to the policy consistency and credibility of the applicant country.

In the paper "The Economics of Offshore Financial Services and the Choice of Tax, Currency, and Exchange-Rate Regimes," *George M. Von Furstenberg,* Indiana University, combines macroeconomic factors with the political framework for business activity. His main point is that policy choices are based on both. Concern for the development of international financial business activity can influence exchange rate policy and the choice between maintaining a separate national currency instead of an internationally well known currency as the euro. The author compares exchange rate policy choices in Denmark and Malta, in offshore financial centers in Europe and in financial centers in East Asia. He concludes that in some jurisdictions, concern for the business interests of the international financial services industry may tip the balance towards choice of fixed exchange rate policy or adoption of an internationally important currency like the euro or the dollar.

In the paper "Promoting Integration of European Retail Payment Systems: Role of Competition, Cooperation and Regulation," *Kari Kemppainen* and *Sinikka Salo*, Bank of Finland stress the importance of creating a level playing field for different providers of payment services in Europe. A well-functioning and integrated payment system is a necessary condition for the existence of a truly single market. According to the authors, the political aim should therefore be to complete a Single Euro Payments Area. The analysis is based on network economics. They conclude that authorities must promote some form of coordination among the market participants. Besides, authorities must monitor the market and ensure that anti-competitive practices are avoided.

Read together, the three papers illuminate some of the important challenges from different perspectives that the New Member States must meet in their policy choices before and to some extent after they have adopted the euro.

Morten Balling

THE ADOPTION OF THE EURO BY NEW MEMBER STATES: CHALLENGES AND VULNERABILITIES

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THE ADOPTION OF THE EURO BY NEW MEMBER STATES: CHALLENGES AND VULNERABILITIES

The topic chosen for the seminar is particularly appropriate at a time when the ten NMS have just entered their third year of EU membership and are increasingly focusing their attention on monetary union. In these introductory comments I shall, therefore, attempt to highlight some key issues which must be dealt with on the path towards the adoption of the euro.

As our policy makers have become acutely aware during the past two years, this path is characterised by manifold challenges and vulnerabilities, not least those associated with real convergence, fiscal consolidation and capital account volatility. The orientation of economic policy in these areas will have to focus strongly, at the level of both national authorities and European institutions, on consistency, flexibility and credibility if we are to extract the maximum gains for all out of this next step in European integration.

1. Long run net benefits of euro adoption

In order to place this topic in its proper context it is first important to recall that the adoption of the euro is expected to produce significant net benefits for the NMS in the long run. A consistent body of literature points to the likelihood of substantial output growth arising out of increased external trade in countries forming currency unions. Recent studies suggest trade gains of between 6% and 15% from the creation of the euro after five years of its existence.[1] On the basis of these estimates, euro adoption could raise GDP by at least 1% to 2% over 20 years in the NMS.[2] These gains arise from the elimination of exchange rate volatility and risk, lower transaction costs, increased competition and price transparency, all of which lead to trade creation. Lower risk premia on borrowing costs and the stronger frameworks for policy discipline prevailing within the euro area are other potential sources of economic growth.

Such considerations will no doubt have played a part in the recent decision by the six members of the Gulf Cooperation Council to seek the advice of the European Central Bank (ECB) in developing a blueprint for forming a currency union and introducing a common currency by 2010. In a similar context, the announcement last week that Iceland is considering joining the euro is most significant. The country's Prime Minister is reported to have said, "It's clear [that] it's not easy to run a small economy and a small currency in a big market".

There will also, of course, be long-term costs arising from the adoption of the euro associated with the loss of monetary and, particularly, exchange rate policy autonomy. Studies based on the Optimum Currency Area (OCA) criteria, however, suggest that NMS are not likely to suffer from a more pronounced incidence of asymmetric shocks than the existing non-core euro area members.[3] Moreover, the nature of shocks to which the economies of these countries are generally subject do not necessarily require intervention on the nominal exchange rate, provided that more efficient mechanisms for aggregate demand management are in place.[4]

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[1] Faruqee (2004)

[2] Schadler et al. (2005)

[3] Fidrmuc (2001), Boreiko (2002)

[4] Schadler et al. (2005)

2. Immediate concerns and inherent vulnerabilities

Against this prospect of net long-term benefits, and indeed if the NMS are to maximize the benefits of euro adoption, they will have to continue making substantial reforms to their economic, financial and social systems. While such changes are in themselves necessary to ensure a smooth adoption of the euro, they will continue to be endogenously engendered once these countries become members of the euro area. In the meantime, however, these reforms are posing major challenges to a number of NMS and are exposing vulnerabilities which, if not addressed, could threaten their successful participation in the euro area.

In the course of this seminar first-hand accounts of such challenges, and of the policy responses to deal with them, will no doubt reveal the rich diversity of country situations within an enlarged EU. Some challenges, however, will be common to most new NMS. One such is the need to catch up in terms of per capita income levels with euro area countries. In several NMS this catching-up process is taking place in good part due to the relatively low wage levels and high rates of return on capital in these countries relative to euro area economies. These characteristics of the real sector are creating challenges from a nominal convergence viewpoint. Chief among them are the issues of real exchange rate appreciation and the need to cope with large, and potentially volatile capital inflows.

Rising real exchange rates in NMS in part reflect productivity growth in the traded sectors giving rise to Balassa-Samuelson effects, as well as a growing demand for non-traded goods and the effects of price deregulation. These factors would lead to relatively high inflation rates unless countered by nominal exchange rate appreciation, both of which could potentially hamper the process of nominal convergence necessary to adopt the euro.[5] The broad conclusion which emerges from a number of studies on this issue is that Balassa-Samuelson effects on the real exchange rate in NMS are estimated to be of the order of 1% to 2% per year.[6]

With regard to capital inflows, these are usually perceived as a source of economic growth, especially when they take the shape of foreign direct

[5] Begg et al. (2003)

[6] For example Cipriani (2000), Kovacs (2002) and Mihaljek and Klau (2003)

investment (FDI). However, they can also usher in risks of volatility and speculative pressures on the exchange rate. This is indeed a factor that is currently affecting some NMS, as capital inflows appear to be shifting from FDI to portfolio flows of a more speculative nature, perhaps in part a by-product of the increased competition for productive investment from Asian countries. In the near future, capital outflows from NMS may also be occasioned by the creation of second pillar pension systems.

Needless to say, net capital inflows are accompanied by current account deficits, reflecting expansions in aggregate demand driven by investment expenditure or lower savings prompted by an expected growth in income. In the present scenario, pressures on the current account are being reinforced by the steady upward trend in international oil prices. Markets often view wide current account deficits as a sign of vulnerability, thereby fuelling volatility in capital flows. So far, a number of NMS with a flexible currency arrangement have managed such volatility through exchange rate flexibility, a tool which might, however, be progressively lost in the run-up to the adoption of the euro.

Developments in financial intermediation may also pose significant challenges in this regard. Thus far there has been a tendency for credit to be relatively low compared to economic activity in NMS, as banks, which are largely foreign-owned in a number of these countries, have been generally averse to advancing a significant amount of credit to enterprises, although tending to step up lending to households.[7] This implies the possibility that with a further internationalisation of the financial sector on account of the introduction of the euro, there could be a more rapid credit expansion through bank borrowing from abroad, with the attendant dangers of overheating and the formation of asset price bubbles.

These considerations have important implications for the maintenance of financial stability in the NMS. While the regulatory and supervisory frameworks are generally recognised to be strong in these countries,[8] they will have to withstand increasing stress over the next few years arising from the growing internationalisation of financial markets and the complexity of the global financial architecture, as well as from domestic macroeconomic dynamics.

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[7] Schadler et al. (2005)

[8] Schadler et al. (2005)

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In the run-up to the adoption of the euro, most NMS will also continue to face the challenge of maintaining acceptable fiscal positions. Current expenditures in many of these countries are high relative to GDP, and in a number of them demographic profiles are casting doubts on the medium-term sustainability of public finance. This is a concern not only from the viewpoint of nominal convergence in terms of the Maastricht criteria, but also from the perspective of the need for flexibility in the area of fiscal policy in order to be able to counter the effects of asymmetric shocks.

3. Requisites for the successful adoption of the euro

In this scenario, the successful adoption of the euro by the NMS requires efforts on two fronts, namely the implementation of economic policies designed to meet the Maastricht criteria on a sustainable basis, and the mobilisation of strong support for euro adoption so as to endow the project with the necessary credibility.

With regard to the former, a continued emphasis on fiscal consolidation, with deficit and debt levels that would be even lower than the threshold values of the Maastricht criteria, would seem to be called for. In addition, reforms aimed at removing rigidities and expenditure trigger effects in social welfare transfers would also be appropriate in some countries. The capacity of economies to respond successfully to the challenge of euro adoption would be further enhanced by a greater degree of price and wage flexibility. Generally speaking, the NMS have a satisfactory track record on this count, at least compared with the non-core euro area countries, but the extent to which the existing flexibility is enough to enable a sufficiently rapid catching up process in the context of an increasingly competitive global trading environment is yet to be assessed.

An overriding consideration relates to the degree of vulnerability that an economy might experience during its participation in ERM II. This is now generally perceived as a testing period to be entered into once the economy is deemed a credible candidate for euro area membership, but not to be postponed to the extent of unduly retarding the adoption of the euro, with the consequent negative effects on policy credibility. Indeed, the exposure to the international markets which participation in ERM II implies requires NMS to follow even more prudent policies, especially on the fiscal front, compared to existing euro-area countries. This is needed to compensate for the vulnerabilities, not least that arising from capital account openness, which the NMS are facing. This aspect of ERM II appears not to be sufficiently understood by advocates of delayed euro adoption in some of our countries.

These policy prerequisites for adopting the euro may, on the other hand, complicate the mobilisation of strong popular support for the euro project. The case for fiscal consolidation may be compelling from a long run growth perspective, but the dividends of such a policy course may fail to materialise in a sufficiently short time to generate the necessary support. Likewise, the introduction of the euro may be perceived as entailing the prospect of higher prices, generating further scepticism among the social partners. And let us not forget that it is these same partners that have to be relied on to deliver the flexibility in the labour and product markets that is required for a successful transition to the euro. An active and constructive social dialogue is, therefore, necessary to support the process.

Given the considerable policy challenges inherent in the adoption of the euro, the European Commission and the ECB have an important role to play in providing the NMS with both practical and moral support for their efforts to achieve this next step in European integration. Such support might not only take the form of regular reports and consultations in order to reassure the markets, but also an effort to minimise uncertainties about the application of the criteria used to assess eligibility for euro adoption. In this regard, the challenge would seem to be to strike a balance between, on the one hand, ensuring transparency and a level playing field and, on the other, giving due weight to the track record of economic policy and performance in the NMS, as well as to the implications for these countries, and indeed for the euro-area as a whole, of an unduly rigid interpretation of the provisions of the Treaty.

4. The application of the Maastricht criteria

In making this point I am clearly not suggesting, as some academics have done, that the Maastricht criteria are “neither necessary, nor sufficient”. On the other hand, there are some aspects of the criteria that could legitimately be the subject of reflection.

The calculation of the reference value of the inflation criterion is a case in point. Over the past few years there has been a debate about how one should define “best performance” in relation to inflation and also about the term “outlier”. And even about why countries outside the euro area should be included among the best performing countries. This debate appears to have resurfaced again during the preparatory phase of the current ECB Convergence Report.

Another, and currently very topical aspect that also has ‘level playing field’ connotations is the impact of the ongoing spike in the international oil price. The current reference value for the HICP inflation criterion is influenced by countries whose energy needs are satisfied in varying degrees by non-oil fuels. At the same time, of the NMS that would not have satisfied the inflation criterion on the basis of the March 2006 data, some are more heavily dependent on oil imports, so that price levels generally in these countries have been reflecting the higher cost of oil and energy to a much greater degree than is the case in the reference countries.

This argument could also apply to Malta in the future since not only is oil the sole source of electricity generation, but a high proportion of drinking water needs are also met by the transformation of sea water, a process that involves a high consumption of electricity.

The difficulty of controlling inflation in current circumstances is indeed also reflected in the fact that three of the present euro area members exceed the inflation reference value by an average of 1 percentage point, and there is evidence pointing towards a divergence in inflation rates between these countries over the past five years.[9] Moreover, the NMS have registered rates of inflation between 2002 and 2005 that were around one half those recorded

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[9] Busetti et al. (2006)

during the preceding four-year period. This is indicative of the significant degree of macroeconomic stabilisation taking place, at the same time that progress continued to be registered in terms of real convergence. In fact, since 2000 real GDP growth in NMS was on average more than double that registered in the euro area member countries.

These considerations acquire greater significance when viewed in the context of fiscal developments. On the basis of 2005 data, among the NMS participating in ERM II only Malta failed to satisfy the relevant criterion, with a fiscal deficit to GDP ratio of 3.3%. Malta, however, expects to be within the reference value by the end of this year. This represents a considerable fiscal consolidation effort, especially when viewed in the context of an average ratio of 6.7% during the first five years of this decade. This progress is expected to prove durable, as it has been based not only on tax measures, but also on the restructuring of public sector entities, spending cuts and efficiency improvements. Challenges to fiscal sustainability in NMS remain, nevertheless, mainly arising out of the future dynamics of the welfare system combined with population ageing, but these are hardly different from those being faced by euro area members.

It is furthermore interesting to note that on average the NMS participating in ERM II recorded lower deficit to GDP ratios compared to the present euro area member countries in 2005, among whom five posted deficits in excess of 3%. The positive fiscal performance of these NMS is further underscored, with some individual exceptions, by their lower levels of public debt, which as a percentage of GDP average around one half of those of the current euro area member countries.

With regard to nominal exchange rates, it is a matter of some satisfaction that none of the NMS participating in ERM II have experienced undue volatility since their entry into the Mechanism. This to a large extent confirms the appropriateness to date of the chosen central parity rates. It is also a reflection of positive market sentiment.

The long-term interest rate is another important indicator of the suitability of economies to participate in ERM II and eventually adopt the euro, as it reflects the judgement of the financial markets regarding the credibility of this process. All the NMS that are in ERM II currently satisfy this criterion, having achieved a consistent track record of downward trends in long-term interest rates over the past five years.

5. Conclusion

In conclusion, I think it is important in this case to look to the future with an eye on the recent past, and recognize that the ten NMS have come a long way in honouring their commitments to achieve the established macroeconomic targets and implement significant structural reforms, often against heavy odds. The magnitude of this undertaking must indeed be viewed not only in terms of the difficulty of the task itself, and the economic and social costs involved, but also against the background of an unfavourable global environment. At the same time they have striven hard to narrow the gap in living standards between themselves and the euro area member countries.

It is, therefore, important that in the examination that follows a country's request for a convergence report due consideration be given to the policy consistency and credibility of the applicant country. A comprehensive economic analysis that is not only quantitative but also qualitative, and which recognizes the difficultly of simultaneously satisfying all the Maastricht criteria in the current world environment would encourage EMU candidate countries to persist in their efforts to achieve even closer nominal and real convergence. It would also provide further evidence that the euro project is credible, that it is both feasible and realizable in a near-term perspective.

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THE ECONOMICS OF OFFSHORE FINANCIAL SERVICES AND THE CHOICE OF TAX, CURRENCY, AND EXCHANGE-RATE REGIMES[10]

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"[U.S.] Treasury officials contend that China has indeed moved toward modernization of its financial system, and they say that the United States' broader interest is in opening the Chinese market to American financial services [than citing it as currency manipulator]."
New York Times, May 10, 2006, p. C11.

[10] Earlier drafts have benefited from comments by Governors Michael C. Bonello (Central Bank of Malta) and Jens Thomsen (Danmarks Nationalbank), and by Morten Balling (Aarhus School of Business) and Bernhard Speyer (Deutsche Bank), at the May 4-5, 2006 SUERF Seminar and in subsequent correspondence. Haizhou Huang, Barclays Capital Asia Ltd., and Michael Xuereb, Malta FSA, also provided exceedingly helpful information and comments as did discussants at the APF biennial conference at the University of Waterloo, Canada, at which this paper was presented on June 16, 2006 prior to final revisions. Responsibility for remaining errors is the author's alone.

Abstract

Open-economy macroeconomists regularly invoke the policy trilemma that states that governments cannot simultaneously maintain an open capital account, a fixed exchange rate, and a domestically-oriented monetary policy. My thesis is that jurisdictions with substantial offshore activities find these and other macroeconomic choices significantly affected by something else: Concern for the continued health and development of their international financial business. Monetary, exchange-rate, and tax policies and the choice of domestic currency all will be impacted by this concern. The different choices made by (1) Denmark and Malta in ERM II, (2) offshore financial centers in Europe, and (3) financial centers in East Asia are considered to develop some general conclusions.

1. Introduction

Open-economy macroeconomists, as in Obstfeld and Taylor (2004), tend to dwell on the "impossible trinity" that states that governments cannot simultaneously maintain (1) an open capital account, (2) a fixed exchange rate, and (3) a domestically oriented monetary policy for any substantial length of time. Others have suggested that, in Latin America at least, only one of these three properties is sustainable, not two. Hausmann (2000) *et al.*, for instance, explain why a justified fear of floating and of financial turmoil keeps flexible exchange-rate regimes from enjoying the luxury of a monetary policy that is dedicated to domestic objectives. They conclude that with an open capital account, floating is not nearly enough to buy independence for monetary policy. Conversely, Fischer (2001, p. 22) argues that among countries with open capital account, soft pegs remain crisis-prone and brittle, even if policy orientation (3) is sacrificed. Giving up an independent monetary policy may not buy pegs that are secure in the absence of capital controls. Thus, the number of sustainable pairs in the trinity of (1) to (3) could end up being zero in a number of developing countries, destroying what is meant by a trilemma.

This paper takes off from this shared terrain, but in a different direction. As hinted in the opening quote, it explores the extent to which macroeconomic choices are influenced by considering what is best for the growth of international financial business:

- Countries or jurisdictions with significant international financial service centers obviously need open capital accounts at least for their offshore financial business.
- They need to conduct most of that business in an important international currency. But areas using such a currency either directly or as external anchor necessarily have fixed nominal exchange rates with other countries in the same block.
- Finally, they do not care much for a domestically-oriented monetary policy – even if feasible – lest it get in the way of their external financial business.

Not so long ago, new classical economics and real-business-cycle economists routinely postulated that the choice of currency and exchange-rate regime can not rationally be relevant to the market-clearing levels of the fundamental economic variables, such as the real interest rate and exchange rates, that determine economic performance. Their "irrelevance" propositions have long since goaded New Keynesian and other economists into demonstrating the importance of "nominal" arrangements for "real" outcomes.[11] For instance, in emphasizing the importance for macroeconomic stability of the choice of currency area and exchange-rate regime, Buiter (1999) emphasized that random noise that buffets nominal variables such as asset prices and foreign-exchange values can cause volatility in real variables, and not just the other way around. When Rose (2004), after an exhaustive meta-analysis of 19 studies, concluded that the mass of the evidence is "consistent with the hypothesis that currency union approximately doubles trade" (p. 107), he was confirming another strong causal link from "nominal" regime choices to "real" effects. H M Treasury (2003) experts' conjectures about what adoption of the euro might do to the stability and competitiveness of the UK economy, and how it might affect inward FDI, all proceed from the premise that the choice can have important consequences that need to be anticipated. The more one gets down to the business of finance[12] – and considers the regulatory and competitive frameworks shaping its scale and scope and its network[13] and settlement capabilities – the more the choices of currency, tax, and exchange-rate regimes matter.

Three cases are considered to show how these choices are affected when more weight is placed on international financial business in a country or its jurisdictions:

(1) Certain factors may be responsible for the contrasting decisions made by Denmark and Malta with regard to membership in the European Monetary Union (EMU). Among these factors are differences in the weight given to maintaining an operating environment most conducive to the growth of the two countries' international financial services business.

[11] Economists have also questioned whether nominal and real exchange rates are well explained by fundamentals. For an update on what has become of *the exchange rate disconnect puzzle* see Sarno (2005).

[12] As is done in Chapter 4 of H M Treasury's (2003) assessment.

[13] As explained at greater length in Honohan and Vittas (2002), the network metaphor suggests the structured interconnectedness of economic relationships. The usefulness of this web of relationships rises with the number of participants that add to the strength (liquidity, robustness) and extent (diversity, coverage) of the network. Thus externalities due to economies of scale and scope, built-in structural redundancy to prevent component (node) failure from posing systemic risks, and complexity in producing or processing innovations and interventions are recurring characteristics of many networks.

(2) Considering the evolution of offshore financial centers and their tax regimes in the EU and elsewhere shows that rogue regimes can not get very far. Rather, past the infant-industry stage, cooperation with the governments of their nonresident clients and membership in regional networks are essential for such centers. Otherwise they will have difficulty to upgrade and deepen their value-added services. Yet such centers legitimately seek to keep taxes largely off the financial services business and both its resident suppliers and nonresident clients. They prefer to tax other types of trade and consumption associated, for instance, with tourism, and immobile assets such as real estate.
(3) East Asian international financial centers, such as Hong Kong, Singapore, and Shanghai, have made different choices about whether to segregate their international financial business from the local economy or to integrate it with the local financial business. Internal capital controls, such as those between domestic and offshore banking or between dealing in convertible and inconvertible currencies, can enable, as well as impede, international financial service business.

2. Seignorage and Currency-Denomination Business: Denmark and Malta, ERM-II

The first case considered is meant to show that international financial business may be at the heart of why even small open economies in the same economic region, like Denmark and Malta, make different currency choices. The Governor of the Central Bank of Malta (Bonello, 2006) has made it the focus of Malta's monetary policy to maintain the peg to the Euro at the central parity (of 0.429300 MTL/EUR or Lm/€) with only a small bid-ask spread. The Central Bank therefore uses its tools, including the central intervention rate, to achieve this objective. In practice this means that it copies movements in the European Central Bank's minimum bid rate on main refinancing operations except when market forces indicate that the risk spread required by holders of Maltese lira assets needs adjusting. This spread against euro was about 75 basis points in the spring of 2006. Governor Bonello (2006, p. 4, online) explains why subordinating monetary policy to the exchange-rate objective may not be enough to guarantee stability, and that giving up having a separate national money may be preferable:

> For a small, open economy like ours with no trade or capital controls, keeping a separate currency leaves us exposed to external shocks and volatile capital flows. ... This vulnerability is indeed the main reason why some leading academics[14] in this field believe that the small new Member States should have been allowed to lock themselves into the relatively greater security of the euro area as quickly as possible.

Denmark's krone, DKK, is pegged tightly to the euro at 7.46038 DKK/EUR, more tightly than the 2.25% "Smithsonian" margins formally adopted would suggest. Since 1999, the monthly average of this exchange rate has never deviated by more than 0.5 percent from the central rate on the strong side, and by even less on the weak side. Once again the distribution of responsibility for economic policy is clear: "The central element of Danmarks Nationalbank's monetary policy is Denmark's fixed exchange-rate policy

[14] One of those the Governor may have had in mind is Willem Buiter, who, writing with Clemens Grafe, concluded that "from an economic point of view, EMU membership should be as early as possible, preferably at the same time as EU membership." Buiter and Grafe (2002, p. 1).

vis-à-vis the euro within the framework of ERM II."[15] "The government then conducts its fiscal and economic policy in general so as to achieve stable economic development and in accordance with a fixed exchange rate." This means that fiscal policy experiments that would upset the exchange markets are to be avoided. As a result, "when the foreign-exchange market is calm," the Nationalbank adjusts its interest rates in step with the ECB's adjustments.[16] Non-sterilized intervention that would drive a wedge between the ECB's and the Nationalbank's interest rates could be expected only in response to exchange-market turbulence (Abildgren, 2006, p. 80).

Until 2005, the 10-year euro-denominated Danish government debt tended to yield 5 to 10 basis points more than 10-year (German) "bunds." DKK-denominated debt tended to be a little more expensive still, with the yield spread over 10-year bunds averaging about 20 basis points in 2003 and 2004. Then in 2005, the spread on these local-currency issues relative to bunds shrank essentially to zero, as it did also for Ireland and Spain. Indeed, in 2005, on account of Denmark's superior economic growth and fiscal rectitude, its country risk premium against Germany may have become sufficiently negative to compensate for any illiquidity premium still afflicting DKK-denominated, compared with euro-denominated, issues.

The facts that the Danish government issues or refinances (now that Denmark is running a fiscal surplus) some of its debt in euro and swaps some more from DKK into euro may indicate that a country's biggest financial business is best not all conducted in its minor currency.[17] Current law allows Danish companies to keep their books in euro, and most of the larger ones have chosen to do so. As a harbinger of things to come in neighboring countries outside the euro area, the Stockholm stock exchange already quotes and transacts in both the local currency and in euro. Driven by a variety of network effects, the euro is taking on some of the characteristics of a parallel finance and business-invoice currency even in Denmark.[18] However, as in

[15] See http://www.nationalbanken.dk/DNUK/Euro.nsf/side/Denmark_and_the_euro.

[16] See the "Introduction to monetary and foreign-exchange policy" on the Nationalbank's web site.

[17] During the period 2002-2005, a steady 11 percent of Denmark's total government debt consisted of foreign currency issues, and, by 2005, the euro share of the latter had risen to 82 percent (von Hagen, 2006, p. 21). However, DKK debt that is swapped into euro debt is not considered in this breakdown.

[18] Although not covering Denmark, Levy Yeyati (2006, pp. 103-108) is perhaps the first to have addressed the issue of whether the effects of euroization are more benign than those of dollarization.

Malta, unilateral euroization in currency holdings and deposit money to date has been small.

Malta has some monetary-outlier characteristics. Among the 102 countries with financial systems (M2) of less than \$10 billion and information on GDP in 1999, Malta had by far the highest ratio of M2 to GDP: 5261/3280 with amounts in millions of U.S. dollars (Bossone, Honohan and Long, 2002, p. 98). This ratio is still sometimes, though increasingly misleadingly, used as a primitive measure of financial depth. An ECB (2003, p. 47) graphic for 14 mostly Central and Eastern European countries plus Turkey and Israel shows that Malta was the only one that experienced a net *reduction* in euro-denominated bank deposits from December 2000 to September 2002. In spite of Malta's clear prospect of joining the EMU at the start of 2008, the level of Maltese liri in circulation since has remained amazingly high. The amount of currency in circulation of over Lm500 million early in 2006 translates into Lm1,250 per Maltese, or around €2,900 per head. Precautionary savings that are popularly salted away in the form of currency and a flourishing off-the-books economy, not unique to Malta, are partly responsible. The comparable figure for the euro area as a whole is only about €1,800. Denmark's own notes and coins outstanding in early 2006, of around DKK55 billion or €7.4 billion, translate into less than €1,400 per capita (for the earlier history see Danmarks Nationalbank, 2003, p. 53). Among EU member countries, Denmark, like Finland (see ECB, 2003, p. 40), has long had the lowest demand for currency in relation to GDP or private consumption as reliance on electronic means of payment has much advanced.

So, at this time, Malta would get more than twice as many euros per capita for cancelling its own currency than Denmark could obtain, and this could result in a major windfall for Malta. The argument is as follows: If the demand for national currency falls to normal levels in a country in the process of domestic financial development, the issuing central bank simply must buy back and cancel the excess and conduct contractive open-market operations as needed to prevent the reduction in the demand for currency from having unwelcome inflationary effects. National currency thus is a form of private wealth that contracts as less of it is demanded in the aggregate and seignorage profit falls. By contrast, if the demand for euro-currency falls to more normal levels in Malta after the conversion, Malta will use any excess euro-currency to finance imports of goods and services or the acquisition of foreign investment assets or to repay international debt. Because changes in euro-currency demand in Malta carry only a minute weight for the euro area as a whole, there will be no appreciable offsetting monetary policy effects.

Furthermore, the cost of whatever small loss of seignorage does result for the system as a whole will be borne almost entirely by EMU members other than Malta. Hence the more euros Malta can get for free in the conversion from lira to euro without thereby overvaluing its currency, the better off it will be.

This also means that currency forms of euroization prior to a planned formal adoption of the euro through monetary union should be discouraged. By detracting from the amount of Malta's own currency that remains outstanding, informal euroization prior to joining EMU would diminish its free terminal conversion-to-euro take. Absent special transitional arrangements such as those made for Germany on account of the wide extraterritorial use that had been made of its currency (DEM), the distribution key for the annual flow of seignorage after joining EMU is given by countries' capital shares in the ECB. These are based half on population and half on GDP shares of EMU members.[19] Hence unilateral euroization detracts from a country's flow seignorage from its own currency prior to joining EMU, and then from the free conversion take upon formal introduction of the euro, but not from the subsequent pass-through of flow seignorage on euro to EMU members.

The strength of incentives to substitute an international for a local currency depends on prevailing, and expected future, choices of currency and exchange rate regimes, and on expectations about how soon the local currency will be surrendered and at what final conversion rate. In open capital markets, currency substitution provides monetary discipline as risk premiums, and hence interests rates, are driven up whenever confidence in the domestic currency and its exchange value decline. If there is a clear prospect of monetary union, the dynamic may be different. For instance, the choice of currency denomination may be influenced by the prospect that any currency mismatches associated with current borrowing in euro, such as liability euroization in balance sheets, will be resolved through the impending accession to EMU. Genberg (2004) has discussed the effects of such forward-looking expectations also on business- and labor-contracts' chosen currency of denomination, and on other means of direct hedging against a prospective currency switch. These ways and means may impose insurance

[19] This distribution key clearly favors poorer countries if their currency holdings in percent of GDP are no larger than those of richer countries. However, in Malta this percentage has been over 25 percent in recent years, making it three to four times as high as on EMU average, and at least 7 times as high as in Denmark, where this percentage has been in the 3.0-3.5 percent range since 2002. Possible implications of this unusual situation for changes in the flow of seignorage during a period of adjustment after joining EMU are explored in an interview with Governor Bonello in The Times (2006).

costs as long as local and international moneys co-exist in a country without pre-announced end and without firm agreement on the level of the final conversion rate for entry into EMU.

Danish referendum voters do not yet feel exposed to such costs, with a majority preferring to let the krone linger in ERM II indefinitely. There also appears to be little public concern that, if Denmark ever fell into a political or economic crisis, the krone's ability to mimic the euro and its interest rates would be undercut. Malta is more concerned about its vulnerability in this regard (see Bonello, 2006, p. 4). Tiny open economies, such as Malta, are least diversified by lines of business and by the number of producers and institutions, each of which is subject to external shocks and to its own internal-management, credit and operational risks.[20] Because of this extra exposure and because international financial services are relatively more important to Malta's economy than to that of Denmark, Malta has decided to head straight from EU membership toward the euro. Malta thus will seek negotiated and secure integration with this international currency and its networks. In this way concern about securing the continued growth of providers of international financial services in a particular jurisdiction may become connected with the decision formally to adopt the euro, rather than to wait and see for the euro to get adopted informally through market forces down the road.

Summary of Case 1. Denmark and Malta are both hard fixers to the euro in ERM-II, but this state is indefinite for Denmark while leading almost certainly to EMU membership for Malta in 2008. The difference in policy is attributable to the facts that Denmark lives so much less off the international financial services business and is far less fearful of confidence shocks and speculative attacks on its currency than Malta. Hence while the plentiful liri are going to be cashed in quickly for euros at the ECB before Malta's extraordinarily high demand for its currency falls, Denmark will try to hold on to its krone even though its usefulness as accounting unit and efficient vehicle for financial services could gradually decline. Denmark can afford to take its time, but Malta may be wise to hurry and take cover through formal adoption of the euro.

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[20] Various limitations to domestic institutional development and internal diversification and independence of decision centers in small countries are masterfully exposited and explored, together with other governance issues, in Herbertsson and Zoega (2006) for Iceland. This is a country whose per capita GDP is about twice as high as Malta's while its population, now over 300,000, is not very much smaller.

3. The Business Model of Offshore Finance and its Legitimation in the EU

Having discussed the profit and loss aspects of the competition for seignorage and the choice of currency denomination, I turn to commercial aspects of offshore finance and how they interact with monetary and exchange arrangements as the second case. This discussion first characterizes the business model of international finance by what is done in the offshore centers of Ireland and Luxembourg[21] before turning to East Asia in the next section to delve into the competitive forces at work between major financial centers.

In recent years, the OECD, the Financial Action Task Force (FATF) housed at the OECD, the Commission of the European Communities and the EU supervisory networks,[22] the BIS as well as the Basel Committee on Banking Supervision and the Financial Stability Forum (FSF) housed at the BIS, in cooperation with IOSCO and IAIS, and with the IMF, all have focused on increasing the transparency of operations in offshore financial centers and on broadening their cooperation in tax and law enforcement matters with other

[21] In the terminology proposed by the IMF (2000, p. 9), Ireland and Luxembourg, like Hong Kong and Singapore, would be classified as regional financial centers. However, the dividing line is fluid as OFCs, as defined in that IMF report, "still range from centers which provide specialist and skilled activities, attractive to major financial institutions, and more lightly regulated centers that provide services that are almost entirely tax driven, and have very limited resources to support financial intermediation." If one defined OFCs just as centers where the bulk of financial activity is offshore on both sides of the balance sheet and the majority of institutions involved are controlled by nonresidents, Luxembourg and Ireland's IFSCs would fit the definition.

In Malta, with the abolition of exchange controls in 2004, there now remains little institutional separation between "onshore" and "offshore" banks with the practical difference lying in the composition, by domestic or foreign residence, of their deposit and loan clients. Malta abolished "offshore" companies so called in 1996, with a transition period until 2004, but it remains an OFC by the de facto definition given above. The 43 double-tax treaties that Malta has concluded so far with other countries generally provide for offsets of Maltese non-resident taxes (up to specified maximum rates of tax) against the tax liability of these non-residents of Malta in their country of residence http://www.lowtax.net/lowtax/html/jmaoltr.html. All except the Swiss and US tax treaties follow the relevant OECD (2005) *Model Tax Convention*.

[22] CEBS, the Committee of European Banking Supervisors, was established in 2004; CESR, the Committee of European Securities Regulators, in 2001; and CEIOPS, the Committee of European Insurance and Occupational Pension Supervisors, in 2003. At the international level, the last two regional committees cooperate closely with IOSCO, the International Organization of Securities Commissions, and IAIS, the International Association of Insurance Supervisors, respectively.

countries. Prodded toward greater transparency and cooperation by these combined forces, European Offshore Financial Centers (OFCs) have made notable progress on the path to openness and legitimacy. As a result, offshore financial services provided by OFCs and by other jurisdictions that act as international financial centers, either globally or for a particular region, have lost some distinctiveness. In new EU member countries, including Malta, the removal of capital controls by 2004 had largely obliterated the institutional segregation of offshore from onshore financial business, though the domestic and international financial business models remain distinct.

This section assesses prevailing business models for delivering financial services within the EU to nonresident clients. The focus is on concrete value-added services provided. An example is Luxembourg, where financial services in 2003 accounted for 30 percent of gross value added, up from 23 percent in 1995,[23] and for two-thirds of service exports. There the keys to the financial sector's success have included a business-friendly approach to legislation, and the ability to attract and retain highly qualified staff. Other local assets available in Luxembourg are a full range of allied professional services, such as legal, accounting and consulting, and a deep technological, communications and settlement infrastructure. At the same time, as noted in IMF (2006, p.2), Luxembourg has earned a high reputation for its financial-service sector by assuring that the sector is prudently capitalized and able to seize new business opportunities. But it is also prepared to strengthen financial-sector supervision, in close consultation with those affected, as new challenges arise for risk management of innovations, or when there is mounting concern over money-laundering and terrorist finance.[24]

With modern communications technology, the final international-financial services sold to customers may be produced with inputs supplied competitively from different locations and firms. For instance, there is a professional investor fund that is licensed in Malta but listed in Dublin. Its

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[23] The percentages are contained in http://www.statistiques.public.lu/stat/Reportfolders/reportfolder.aspx Comptes nationaux, Graphique de la structure de la somme des valeurs ajoutées brutes – A11, 2003. National-accounts estimates of value added by sector do not attribute value added in ancillary sectors, such as accounting and legal services, to the sector that demands their output as inputs to its own production.

[24] For distinctions between the conduits of terrorist finance and of money laundering and what to do about each of them, see von Furstenberg (2005a). For a treatment of international financial crime with reference to Malta and its Prevention of Money Laundering Act (1994) and Regulations (2003) see Caruana and Farrugia (2003). Since then a Prevention of Financial Markets Abuse Act (2005) was passed.

assets may be managed elsewhere, with back-office support sourced from yet a fourth country. What and how offshore financial services are sold can be determined in part from how they are advertised. In Europe this happens rather more loudly in the newer growth centers than in the oldest centers such as Luxembourg. For example, the International Financial Services Centre (IFSC, accessed 2006) in Dublin assigns the hundreds of international operations and managed entities in the IFSC program to the categories listed below. Promotional material, itemized below in italics, has been added for some of them in this IFSC's web site.

- Banking
Typical banking activities in the IFSC include asset financing/aircraft leasing/sales aid financing; international lending and loan syndications; mutual funds management and administration; bond and commercial paper issuance; bank treasury operations; back office activities; credit card operations; management of client treasury functions; securitisations; and custodial/trustee and administrative services to the mutual funds industry.

- Insurance
Over a quarter of the IFSC companies are involved in insurance-related operations, particularly captive insurance and reinsurance. International activities carried out here include direct-writing insurance, insurance broking, reinsurance and captive management, risk securitisation and risk derivatives, back office operations, pan-European pensions, treasury and asset financing and back office administration. [Captives that were started by companies for their own insurance needs sometimes have broadened out by offering coverage also to the firm's suppliers and customers.]

- Mutual Funds
Funds management companies [and administrators of multiple funds] are attracted to Ireland for a number of reasons including: low corporation tax rate; UCITS[25] *passport allowing for distribution throughout the EU; no duty on the registration, issue or transfer of shares or units of interest; no VAT on fund management services; no withholding tax on most interest and dividend payments; a wide range of tax transparent fund structures; and no capital gains tax on funds gains.*

[25] Undertakings for Collective Investment in Transferable Securities, UCITS, are harmonized collective investment undertakings that can operate throughout the EU without the need for multiple listings.

- Securitisation

  Securitisation has been provided for in the IFSC since 1991, when it primarily involved transactions in residential mortgages. The Finance Act, 1996, broadened the range of assets that could be securitized in the IFSC and gave 'deemed' trading status for the special purpose vehicle (SPV).

- Treasury

  Many companies are centralising their treasury operations and are either managing these themselves or outsourcing them to a bank. Some of the global treasury activities carried out at the IFSC include: inter-group lending/financing; cash pooling, netting, cash management; exchange and interest rate risk management; debt factoring; active management of group liquidity; cross-border leasing; and bond and commercial paper issuance.

  There are a number of key incentives for companies locating treasury operations in Ireland, including: competitive corporate tax rate; withholding tax exemptions on most interest and dividend payments, access to Ireland's large networks of double tax treaties; EU and OECD membership; and unilateral foreign tax credit relief on interest income from countries not in the double tax treaty network.

Among the many financial services listed by the IFSC (2006) but not highlighted in this way are Asset Management, Custody & Trustee, Finance and Leasing, Hedge Funds, Reinsurance, Special Financial Services, and Stockbrokerage. Although more is said and Dublin's IFSC also boasts of other comparative advantages, it is hard to avoid the impression that its sales pitch centers on successful tax competition. Luxembourg, though long under pressure for providing tax haven services inside the EU, has been less explicit in advertising its tax advantages to foreign investors, perhaps because, after decades of prudent practice, advertisement was no longer needed. A full complement of tax advantages for the providers of offshore financial services (items (1) through (3) below), as well as their clients (items (4) and (5) below), typically involves low or no (1) corporation income tax, (2) VAT, (3) and individual income tax (expatriation allowances), as well as low or no (4) withholding tax on dividends and interest income, and (5) estate tax (through anonymity of trust and private-wealth management accounts of nonresidents). It also involves a network of double-tax treaties that govern the extent of bilateral tax cooperation and forbearance.

The combination of growing fiscal and tax pressures in a number of advanced countries and rising security concerns point to increased cooperation rather than confrontation in the future. Cooperation has already advanced in one respect: After considerable resistance and delay, as from July 1, 2005, all EU member states except Belgium, Luxembourg, and Austria (and territories of member states such as the Crown Dependencies of Guernsey, the Isle of Man, and Jersey) agreed to apply the exchange-of-information provisions of the EU Savings Directive (Council Directive 2003/48/EC, effective July 1, 2005)[26] on interest payments to individuals resident in other member states. The three excepted countries will introduce a system of information reporting only at the end of a transitional period of as yet undetermined length. In the interim they will levy a withholding tax at the rate of 15 percent for three years until mid-2008, for another three years at 20 percent until mid-2011, and at 35 percent thereafter. They will transfer 75 percent of the revenue of this withholding tax to the investor's state of residence.

The IMF (2006, p. 2) joined Luxembourg in downplaying (spoiling of) the tax play:

> Contrary to widespread concerns, the EU Savings Directive, which introduced withholding taxes on foreign financial investments in July 2005, seems to have had little impact on private banking activities. Moreover the Directive appears to have created a level playing field among financial centers, further strengthening Luxembourg's reputation as an investment location.

Not every territory and country has been as unconcerned about the application of the Directive. Rogoff (2005, p. 3), for instance, reported that application of the Directive has been viewed as playing into the hands of East Asian centers:

> The Cayman business community strongly opposed the directive. Considering that up to 20 percent of Cayman's financial business involves managing money from EU residents, the consequences of the directive would be significant capital flight from Cayman and numerous bank closures. It would prove difficult for Cayman to compete with offshore jurisdictions that did not have to comply with the directive, such as Hong Kong and Singapore.

[26] The proposal that led to the EU Savings Directive was presented by the Commission of the European Communities on July 18, 2001. For the full citation see Commission (2001).

Taylor and Prystay (2006) similarly pointed out that Swiss banking giants, like other major banks, have expanded their private-banking operations in Singapore to restore tax-haven services to some of their EU customers from distant offshore locations. Even the OECD (2000, p. 7) has commiserated:

> The Committee [on Fiscal Affairs] accepts that the changes necessary for jurisdictions meeting the tax haven criteria to commit to remove their harmful tax practices may adversely affect the economies of some of those jurisdictions.

Yet global competition among tax haven jurisdictions[27] may be imperfect on account of transaction costs indirectly linked to distance. Rose and Spiegel (2005), for instance, have found another successful application of the gravity model in that moving assets offshore incurs a cost that is increasing in distance between the OFC and its sources of funds. The IMF (2000, p. 10) likewise lists "proximity to major economies, or to countries attracting capital inflows" as one of eight *legitimate* reasons for OFCs.[28] OFCs thus may have a cost and networking advantage when serving clients of their region. This limits the strength of the competition to be expected from OFCs based in other regions. Hence there could be an economic reason why Malta has been feeling pressure from nearby countries in the EU, and not just from the OECD and its Model Tax Convention (OECD, 2005), to eliminate Harmful Tax Practices.[29]

[27] The United States also provides tax haven services as it exempts portfolio interest and interest on deposits paid to nonresident aliens (NRAs) from NRA withholding. Other types of capital incomes, most notably dividends and real property income and natural resource royalties, are subject to the NRA withholding requirement at rates ranging from 5 percent to 30 percent as specified in the bilateral tax treaties of the United States with different countries. However, Qualified Intermediaries (QIs), often foreign branches of U.S. financial institutions, are not required to forward documentation obtained from foreign account holders to the U.S. withholding agent from whom the QI receives payment of U.S. income (IRS, 2006, pp. 5, 15–17), thereby impeding discovery and international information exchange.

[28] The other seven are (1) lower explicit taxation and consequentially increased after tax profit, (2) simpler prudential regulatory frameworks that reduce implicit taxation, (3) minimum formalities for incorporation; (4) the existence of adequate legal frameworks that safeguard the integrity of principal-agent relations, (6) the reputation of specific OFCs, and the specialist services provided, (7) freedom from exchange controls, and (8) a means for safeguarding assets from the impact of litigation etc.

[29] Malta was not listed by the OECD (2000, p. 17) as one of the 35 "tax haven" jurisdictions that had not agreed in advance to eliminate their harmful tax practices.

Cooperation or Confrontation?

After characterizing tax haven countries as thwarting the sovereign fiscal choices of other countries, the OECD (1998, pp. 37–59; 2000, pp. 24–26; 2004, pp. 14–17) outlined a set of "defensive measures, including non-tax measures" (OECD, 2000, p. 26; see also 1998, p. 62). These could be taken unilaterally, multilaterally, or ultimately on a globally coordinated basis, to induce "uncooperative Tax Haven" countries to stop tax practices judged harmful to other countries.

> For example, [clearly harmful is] a preferential [to nonresidents] tax regime which is intended and operated to facilitate the evasion of tax properly owing to other countries, which is non-transparent and with respect to which the country providing the regime does not exchange information. Severe counter-measures are appropriate and indeed necessary to deal effectively with this extreme type of harmful tax competition. (OECD, 1998, p. 40).

This is not the place to discuss where to draw the line between beneficial international tax competition and countries harmfully competing to provide sanctuary for each other's tax evaders. Fact is that those on the losing side of this negative-sum game may decide officially to object and then take "defensive" measures to cut their losses. Tax haven countries therefore must seek to come to terms with designated sword carriers such as the OECD. They do so to protect their international capital flows and financial business from being disrupted by actual or threatened countermeasures or sanctions. These could be applied against them or their nonresident clients. All this means that overt ring-fencing, the practice of providing preferential tax treatment to non-resident investors by statute, must be ended.[30]

To bolster compliance, the OECD (2000, p. 25) suggests considering imposing certain transaction taxes ("transactional charges or levies") from the

[30] Even without formally discriminatory legislation, much has been done to favor nonresident investors. An example is provided by Malta. After first taxing corporate incomes from foreign sources at one-third of the 35% tax rate applied to such incomes if generated from domestic sources, Malta switched to a "neutral" tax imputation system immediately granting a dividend-paid credit as an offset to two-thirds of the corporation income tax otherwise due in either case. If, as expected, nonresident dividend recipients find is easier than resident recipients to conceal the taxable dividends from their respective tax authorities, a de facto tax preference for nonresident investors remains.

outside to discourage dealing with uncooperative tax haven countries. It also suggests that tax treaties with tax haven jurisdictions might have to be cancelled (1998, pp. 49–50) or at least modified to "contain a limitation of benefits clause which would prevent the benefits of the treaty from being claimed by third country residents who have no real connection with the country or jurisdiction" (2004, p. 16). In addition, members who feel injured by harmful tax competition are admonished to consider a broad range of retaliatory options because "there are no reasons ... why the actions directed at harmful tax competition should be restricted to the tax area" (OECD, 1998, pp. 49–50). Thus OECD countries have availed themselves of rationale and justification for unilateral and multilateral adoption of punitive measures.

These measures can take different forms. Just like impediments to trade, capital controls can be applied against inflows or outflows. They can be applied through the administration of quantitative measures, such as the licensing of foreign investment projects and of the associated financial transfers, or through more indirect, price-based or tax-equivalent measures. The latter are often also described as "market-based" since the response to them, once set, is determined by market forces and not by administrative discretion. Examples are dual exchange-rate regimes for trade and capital-account transactions, or uncompensated deposit requirements to discourage hot-money inflows. Both quantity- and price-based capital controls can be applied by the party choosing to impose its own controls or by parties imposing such controls as a punitive measure upon it. External capital controls are invariably trade-related and not just through the balance-of-payments constraint. They also impinge directly on the competitiveness and profitability of a country's financial-services business and hence on its scope, scale, and level of development. In some countries capital controls also have been used internally to segregate its domestic from its "offshore" international finance business.

If a country integrates successfully first into the EU and then EMU, it will be much better protected against punitive actions by fellow members than if it had remained on its own. As part of the price of EU-entry, such a country will have to transpose dozens of directives in the area of financial services into national regulation and ensure effective enforcement of their provisions by its supervisory authorities. In return, the country will be financially integrated into a regional network of financial services providing for cross-border competition and market access, low-cost post-trade services such as payments and securities settlements, and legal certainty in a number of respects.

The Commission's (2005, p. 7) *Green Paper on Financial Services Policy* still warns that unless national supervisors ensure application of "the highest ethical standards ... also vis-à-vis offshore financial centres," "market and political pressure for additional regulatory intervention in these and other domains will intensify ... The objective is to strengthen disclosure when using entities in off-shore financial centres." Yet the new member countries with a special interest in these matters will also have more say in shaping any such additional regulatory intervention when they operate as EMU members from inside.

President Trichet (2006, p. 2) has defined the ECB's goal of European financial integration as fully achieved only when all potential participants have equal access to the European financial market and its instruments and services, both as suppliers and demanders. Sanctions or "special measures" directed against particular members do not fit this agenda. Trichet has explained why achieving this goal is important not only for the effectiveness of the transmission of the ECB's monetary policy and for financial stability but also for the efficiency of financial intermediation and hence for economic growth. Reports to the Commission (2005, see pp. 14–15 for brief descriptions of their findings) have contained much of the evidence cited in this regard.[31] If some countries are better than others at taking advantage of the common rules to expand their financial services business, there is no basis for complaint.

Summary of Case 2. Even those OFCs that have achieved solid respectability got their start by offering lax regulation and supervision of offshore financial services providers and emphasizing tax-haven benefits. To prosper, they then had to develop economies of scale and scope and expertise in the provision of financial services that enabled them to compete also on the basis of superior efficiencies. The OECD's and the EU's initiatives to put an end to certain "harmful" tax practices, as well as the monitoring, identification, and reporting mandates tightened after 9/11, have crimped the offshore tax-haven business in the EU for EU customers. But for offshore centers that are newcomers to the EU and looking forward to EMU, there are some benefits that could offset the costs arising from greater transparency about their business and its nonresident customers: Being plugged into pan-European decision and operation processes and securities and payments settlement

[31] See especially Commission of the European Communities (1988); Gianetti *et al.* (2002); Hartmann, Maddaloni and Manganelli (2003); Kok *et al*. (2004); London Economics (2002); Sapir *et al.* (2004).

systems can help guarantee wide market access and offset the costs of accepting curbs on the tax-haven business. Greater legal certainty and economic security for participating institutions and their clients may be another reward for relying on cooperative solutions. In addition, for financial institutions in Malta that wish to borrow from their central bank as counterparties of the Eurosystem, gaining the ability to mobilize eligible collateral held anywhere in the EU-15 countries would be of value to support their far-flung operations (for a description of the Correspondent Central Banking Model, CCBM, see ECB, 2005). Once again, what are normally viewed as macroeconomic choices, such as joining EMU and accepting common standards, may in part be driven by legitimate financial-service interests.

4. Singapore, Hong Kong, Shanghai: Onshore and Offshore Financial Development

Jurisdictions in which offshore financial business, conducted mostly in USD, equals or surpasses onshore business, conducted mostly in local currency, face unique problems of capital controls and financial management and in the choice of exchange-rate regime. Policy issues in this last case considered, case 3, relate to the costs and benefits of segregating offshore from onshore business, fostering international financial business development, and sorting out the implications of regulations and controls for financial stability and international relations. Even the continued maintenance of a separate domestic monetary unit can become an issue if that unit finds itself increasingly on the losing side of substitution between local and international currency denominations. What policy choices do these issues present for Singapore, Hong Kong, and Shanghai, three unequally competing centers in East Asia?

The experience of Singapore demonstrates that financial-market integration may interfere with the pursuit of independent monetary-policy objectives when a large offshore market exists which operates in a currency denomination, the Asian dollar (an accounting unit whose value is fixed at one U.S. dollar), that is valued differently from the currency issued for the home market (the Singapore dollar, SGD, that is subject to a managed float with inflation targeting). For example, if funds raised in the offshore market can readily be brought into the local market, there may be upward pressures on exchange rates, asset prices, and bank money supply that are difficult to resist. Under such conditions speculative movements of funds could help create the very conditions that would make speculative attacks, say on currencies viewed as undervalued, successful. In addition, if domestic credit tightening left banks free to shift to "cheap" foreign-currency borrowing as a major source of funds, dangerous currency mismatches could build up on their balance sheets, as in the run-up to the 1997–98 East Asian crisis.

To prevent such risk exposure, Singapore has partially segregated its financial business into (a) business conducted by a Domestic Banking Unit (DBU) and (b) business conducted in an Asian dollar facility known as an Asian Currency Unit (ACU)[32]. Banks are allowed to deal with any currency in the DBU. In the

[32] Such facilities are not to be confused with the Asian Clearing Union of the same acronym. That union keeps its settlement accounts in the Asian Monetary Unit (AMU) equal to one USD.

ACU, they are allowed to deal in all currencies except the SGD. Even though swapping funds supplied by the ACU into SGD at the DBU is no longer prohibited within certain limits, less than 1 percent of what is raised from banks and nonbanks outside Singapore appears to have been retained in Singapore. This was found in an investigation by Tee (2003) of the sources and uses of funds as of July 2002. Hence, at least until then, the separation between onshore and offshore markets in Singapore remained fairly intact. As integration of the USD and SGD markets proceeds, the co-habitation, on many balance sheets, of a local currency with an international currency unit from outside the region, still characteristic of (South-)East Asia, may be fraught with unnecessary exchange-rate risks (see Levy Yeyati, 2006). Consequently, countries may prefer to minimize exchange-rate movements between the local and the international currency in domestic use by sacrificing a monetary policy that is geared to domestic objectives (Hausmann *et al*., 2000) even when they are "floating."

Since the 1983 adoption of a USD-based currency-board arrangement known as "the linked exchange-rate system," Hong Kong has remained committed to tying its currency and financial system to USD as its onshore and offshore markets have been integrated. Except during major regional exchange-rate crises, the HKD thus has been a near-perfect substitute for USD, sharing its liquidity, financial depth, low interest rates and its small – formerly mostly negative[33] – exchange-risk premiums against other major currencies. (A negative exchange risk premium of one currency against others is indicated by systematically lower real interest rates being demanded on the former currency in free international capital markets so that uncovered interest parity does not hold.) Almost half of all deposits at Hong Kong banks are in currencies other than HKD, mostly in USD and increasingly also in renminbi (RMB). A liberal financial regime has allowed Hong Kong to function as a major international financial center for decades, serving not only the entrepôt functions of both importing and exporting large amounts of finance capital and FDI but also allowing it to be a sizable *net* capital exporter.

After the handover to China in 1997, use of the RMB in Hong Kong has been legalized in ever more uses and in ever larger maximum amounts. Currently

[33] The appearance of a negative risk premium of HKD with USD is somewhat deceptive. The reason for it is, at least in part, that the tight and numerically explicit weak-side-only limit placed on fluctuations of the HKD/USD rate from its parity of 7.8, due to its asymmetry, created a sustained mathematical expectation of some appreciation from parity until the strong-side limit was made equally tight and explicit. This occurred on May 18, 2005 when the convertibility zone of 7.75 to 7.85 HKD/USD was introduced.

hardly a week goes by without new regulations being issued that expand the monetary uses of yuan (CNY=RMB) in Hong Kong and the freedom to conduct CNY-denominated business for local customers in Hong Kong banks. However, lending in RMB by Hong Kong banks currently still is subject to restrictions. As a result, just as HKD has long been a substantial currency competitor to CNY in the Pearl River Basin, CNY is becoming an onshore currency competitor and parallel currency to HKD in Hong Kong. To the extent a CNY/USD rate that is sticky but not fixed and a HKD that is hard-fixed against USD continue to co-exist inside China, there will be greater internal exposure to exchange risk. The shocks to balance-sheets and competitiveness that could result when the CNY/USD rate moves while two separate exchange-rate regimes still are maintained inside China may eventually make the HKD's currency-board peg to USD politically and financially unsustainable. On the other hand, once HKD is tied firmly to RMB in a joint managed float against USD, the loss of distinctiveness may leave less and less reason for keeping HKD as a separate currency inside China indefinitely. Thus speculation about the ultimate fate of the HKD has spread (e.g., von Furstenberg, 2005b; Fung, 2006). Intermediate positions, such as switching the currency peg of the HKD from USD to RMB, have also been considered (Genberg, 2006).

HKD and RMB coming into much closer contact with each other alters the basis for macroeconomic policy choices. For example, when the RMB on its upward crawl reaches parity with HKD inside, or on the strong side of, the HKD convertibility zone of 7.85–7.75 per USD, legal interchangeability between HKD and RMB might be precipitated that could lead to internal monetary union. Before that, the "one-country, two systems" principle would have to be modified by mutual agreement.[34] Should the HKD be squeezed out

[34] As summarized on the HKMA website, the Basic Law states that "the Hong Kong dollar shall continue to be a separate and freely convertible currency; it also prohibits the imposition of exchange controls and requires the Government of Hong Kong SAR to provide an economic and legal environment appropriate for the maintenance of Hong Kong's status as an international financial centre." Technically, monetary union at a 1:1 equivalence rate would minimize transition and information costs as HKD obligations would become dischargeable in equal amounts of RMB, and HKD notes could remain in circulation as equivalent to RMB notes of the same face amount until they wear out. Thus new contracts and notes would cease to be issued in HKD, but existing contracts and notes would not need to be re-denominated or exchanged. Of course there would still be a host of issues to be dealt with, such as what to do about the fair liquidation of options, forwards, currency swaps, and other intertemporal derivative products built on the HKD and about the interest rate on existing variable-rate HKD-denominated claims once the HKD as a separate currency with its own interest rates has ceased to exist. To deal with these issues, a period of at least a year of RMB/USD stabilization in the 7.75-7.85 range would be most convenient, pausing in the currency-board zone long enough for fair and efficient adjustment of financial instruments and markets before letting the RMB float to a greater degree.

and new HKD-denominated currency and claims cease to be issued, this would immediately raise the question of whether Hong Kong's pre-eminent international financial services business can continue to flourish without the liberal status conferred by the HKD and its present regime. At the very least, international banking facilities would have to be authorized in Hong Kong to protect its financial business from any of the external capital controls on the use of RMB still applied in the mainland.[35] If the HKD is to be folded into the RMB in future years, it must be done in a way that fully protects the capabilities and global standing of Hong Kong's international financial business.

There are alternative outcomes to consider. Although Hong Kong continues to grow its offshore business, partly in HKD, but mostly in USD, it might be able to become a major center for offshore financial business in RMB in future years even while continuing to use HKD internally. Such a development would be analogous to London having emerged as the center of regional and global euro-denominated financing activity without the UK relinquishing the pound (GBP). Whether Hong Kong could follow a similar path without detriment to its leading role in the eventual internationalization of RMB and the latter's emergence as a regional key currency, and anchor for the currencies of countries to the South of China, is still uncertain. As the Chief Executive of the Hong Kong Monetary Authority (HKMA, 2006, p. 1) has stressed, "further expansion of renminbi business would not only raise Hong Kong's status as an international financial centre, but also provide a testing ground for the gradual move towards full convertibility of the renminbi." However, it is doubtful that Hong Kong's financial institutions will have the lowest funding costs in RMB in all of China unless Hong Kong ultimately adopts the RMB as its own currency, thereby achieving internal monetary union. Furthermore, the current restriction on direct RMB lending to loan clients of Hong Kong banks – a form of internal capital controls – limits these banks' ability to aggressively bid for RMB deposits. Thus, consideration for financial business and the choice of currency, exchange-rate, and capital-control regimes are closely linked.

As previously discussed for OFCs in Europe, tax bases and rates are important for where to book international financial business. In the late 1960s, Hong Kong lost out to Singapore as the prime location for starting the Asian Dollar Market (ADM) in part by refusing (until 1982) to abolish the interest withholding tax on foreign currency deposits that Singapore had

[35] According to Ma and McCauley (2006), these controls, though rapidly reconfigured and redirected as needed by China's State Administration of Foreign Exchange, continue to bite for the time being.

dispensed with from the start. In recent decades, however, Hong Kong has been highly successful in establishing itself as a low-tax location for international financial investment. While Hong-Kong's post-return (July 1, 1997) status as "One Country, Two Systems" allows differences in systems of taxation, aggressive tax competition for offshore business between Hong Kong and Shanghai is unlikely beyond what Hong Kong already offers in competition with Singapore. Hong Kong may outsource routine parts of the financial business, such as back-office operations, to lower-wage and lower-rent jurisdictions without losing its leading edge in financial-product and investment-strategy development and in regional underwriting and market making. While not seeking to tax foreign-sourced income at all, Hong Kong's tax rates are also very low and flat on income from domestic sources across the board (for instance, 15.5 percent in early 2006 on profits, wages and salaries, and property gains). Furthermore, its fiscal condition has fully recovered from difficulties that were encountered earlier this decade partly on account of unusually high reliance on volatile non-tax revenue sources. All this and generous expatriate allowances make Hong Kong attractive for high net-worth individuals who contribute to its offshore financial business.

Once again, competitive conditions created for financial services are seen to depend not only on the choice of exchange-rate regime and the degree of monetary and financial integration, but also on the tax regime and fiscal soundness. These factors, in conjunction with network economies, agglomeration benefits, and economies of scale, are probably more important factors in the choice of location for international financial business than differences in pay scales for lower-level workers and in rental rates for office space.

Shanghai

Soon after the Pudong New Area was established in 1990 as a government-assisted business development project, Shanghai set out to become a major competitor for Singapore's and Hong Kong's offshore business. Through development of its futures exchange and of a growing range of derivatives for hedging and for risk transformation and repackaging, Shanghai since has taken strides to build the financial infrastructure supporting its bid to become a major offshore financial center by 2010. In this regard, Shanghai may be set to launch the derivative and hedging products that will gradually allow the RMB to float more noticeably against USD while capital controls continue to be eased. However, Shanghai has yet to develop the liquidity and market depth needed to become an able competitor with Hong Kong in any of the major lines of financial business, including trading of equities. This in spite of the fact that floatations arising from privatization of government enterprises in mainland China are directed to boost Shanghai's struggling stock market. In addition, the bond market within mainland China, and foreign participation in securitization, still need to be developed.

Given China's existing external capital controls, Shanghai's approach is to segregate offshore from onshore business by preventing local-currency claims and obligations from being used in the offshore business. As years earlier in Singapore, this segregation will get in the way of large net capital exports being intermediated by Shanghai's offshore sector. To truly become an international financial center, Shanghai, like Hong Kong, would have to be allowed to offer international RMB finance and financial instruments to nonresidents rather than driving this developing business to offshore locations, including Singapore, or leaving it to IFIs to issue panda bonds to nonresidents. Thus capital controls complicate developing a jurisdiction's international financial business and hamper the emergence of deep and liquid financial markets.

Summary of Case 3. Singapore, Hong Kong and Shanghai are at different stages of financial development, but at each stage there is growing emphasis on international financial business. Singapore's offshore market was segregated from the domestic market to prevent internationalization of SGD and to safeguard the capacity for an independent monetary policy. Any remaining capital controls in Hong Kong are internal to China and designed solely to limit the use of RMB in Hong Kong's own financial business as if Hong Kong as a whole were a segregated OFC of China. As these internal controls are relaxed, and the RMB, with its powerful network externalities and large potential use for financial services, makes ever more inroads into Hong Kong's domestic financial business, the HKD may be squeezed out between RMB and USD. To the extent Shanghai is attempting to build a regional financial services center, that center still is fenced in by capital controls. In these respects Shanghai thus is reliving some of Singapore's early history. Since then, in attracting high-risk private financial business, Singapore has been slow in outgrowing the intermediate stage of IFSC development. This is a stage at which offshore financial centers still see more potential in offering a lax regulatory and supervisory environment than investing in a high reputation for financial soundness by lowering operational risk and legal hazards.[36]

[36] Giap and Kang (2005) devote just 1 out of 38 pages of their comprehensive review of Singapore's competitiveness to financial services. They see the Monetary Authority of Singapore as the nucleus of a financial sector development agency they would like to see established.

5. Conclusions

Like with Optimum-Currency-Area (OCA) criteria, most academic typologies have set out the combinations of choices available with any particular exchange rate regime in purely macroeconomic terms. Adding business economics to macroeconomics, this paper has emphasized the requirements for a flourishing international financial services sector instead and how they impinge on macroeconomic choices. The paper considered three cases or situations. These ranged from a brief study contrasting the choices of Denmark and Malta in ERM II, to looking at Offshore Financial Centers and their business model in the EU, and to the macroeconomic operating environment most conducive to three international financial service centers in East Asia.

Weighing these three cases supports some generalizations.

Promoting a country's international financial business militates against its:
1. Maintaining internal and external capital controls to prevent currency substitution.
2. Retaining a local currency with limited financial uses and no international prospects.
3. Relying principally on tax-haven services to nonresidents and lax regulation and supervision of offshore financial institutions for growth beyond the start-up phase.

Conversely, a jurisdiction's international financial business benefits from its achieving liquidity and depth in financial markets for the full range of equity, debt, and derivative products that are needed to conduct trading-intensive types of financial business. Macroeconomic steps to this end include:

1. Seeking to capitalize on network externalities by gaining insider status and assured access through close administrative, legal, economic and financial integration with neighboring jurisdictions.
2. Evolving an international financial currency if a large national or regional economic base is available to do so.
3. Being prepared to give up having an indigenous currency and agreeing to regional currency-consolidation if major-currency status cannot otherwise be achieved.

Very few jurisdictions other than OFCs base their macroeconomic choices primarily on the interests of their financial services industry. Yet even in some larger and more diversified jurisdictions, these interests may tip the balance. Hence they deserve increased attention not least from international macroeconomists.

Issues for Further Research

Analytically, one of the most important issues that remain to be assessed is the comparative efficiency of different modes of the international financial services business, in particular offshore finance. If offshore finance is viewed as parallel or underground finance by analogy with the underground economy, it would owe its existence to burdensome tax, regulatory, and license costs, and to limitations on business powers in the official sector. These may discourage participation in the official economy in spite of superior access to legal security and network benefits that it brings.

The contribution of any such, potentially second-best, offshore activity to the size and efficiency of the networks of the international financial system is ambiguous. On the one hand the demand for currency and asset substitutions within countries may be satisfied by OFCs when such substitutions are blocked within the domestic monetary and financial system. The existence of OFCs thus could discourage countries from excessive use of seignorage and of explicit taxes on mobile capital and its yield.[37] On the other hand, such discipline effects are incidental as countries do not encourage the supply of OFC services from within their borders to discipline themselves. Rather, they and the foreign companies they host seek to profit from bypassing the regulations, prudential supervision, taxes and business restrictions imposed elsewhere. However, as illustrated by the Barings collapse brought on by unsupervised offshore trading and position taking in Singapore, high-risk activities that can be conducted with little or no supervision only in offshore affiliates still could have the capacity to bring down major financial institutions operating in both the offshore and onshore sectors. Bankruptcies on an even larger scale could pose systemic risk if they overwhelmed networks otherwise designed to isolate trouble and to limit the damage it may cause. Hence consolidated supervision that extends to operational risks may

[37] Theories of allocatively optimal taxation, by their inverse-elasticity rule, advise taxing the most mobile or “elastic” tax bases the least. However, their application is complex in this area since they do not take account of the fact that the degree of this elasticity itself is an inverse function of the extent of international agreement on maintaining common levels of capital taxation. Thus the elasticity itself is in part policy determined and a function of the extent of joint action with others.

be required. Integrative steps such as this ultimately could eliminate much of what still distinguishes onshore from offshore financial operations.

The optimal degree of integration between onshore and offshore activities may be an issue also for other reasons because the presence of offshore finance may not significantly contribute to the quality and depth of onshore finance in the same country. Such a lack of connectedness persists in small, for remaining residents perennially poor and corrupt, OFC countries, such as certain island states in the Pacific, including Nauru. It may occur even in large countries such as mainland China in which capital controls are bracing the firewall between onshore and offshore financial business sectors. While some limited transfer between these sectors is allowed there, it is subject to detailed quantity controls that are imposed for instance through the Qualified Domestic Institutional Investor and Qualified International Institutional Investor license and authorization schemes. Observing such continuing segmentation of financial markets in developing countries raises the question of when conditions are ripe for quantity controls to be lifted so that arbitrage can do its work and equalize price rates between onshore and offshore markets. Thus basic analytical issues relating to the changing needs for and of OFCs and IFSCs remain to be investigated.

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PROMOTING INTEGRATION OF EUROPEAN RETAIL PAYMENT SYSTEMS: ROLE OF COMPETITION, COOPERATION AND REGULATION[38]

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Abstract

The present retail payments clearing and settlement infrastructure in both the EU and the euro area is still very fragmented. Therefore, it is understandable that, in recent years, a debate on the sluggishness of the integration of the European retail payment systems has emerged. The present paper aims at contributing to this debate by drawing some policy lessons from the theory of network economics. This is justifiable on the grounds that the retail payment industry inherently has many characteristics in common with other network industries, like telecommunications. In the paper, special emphasis is devoted to the important competition-cooperation nexus in retail payment systems. The main message of the paper is that the fundamental role of payment system regulators is to provide *a level playing field* for different service providers. Moreover, compatibility and interoperability, e.g. in the form of commonly adopted standards, are key requirements for the payment system efficiency, as they facilitate the contestability of the market (*competition in the market*). Regarding dynamic efficiency, the regulators also need to ensure adequate incentives for innovation and investment (*competition for the market*). In addition to discussing policy issues at a general level, the paper analyses developments in the European retail payment systems as well as the roles and aims of different stakeholders in the current process of building the Single Euro Payments Area (SEPA).

1. Introduction

Since the introduction of euro banknotes and coins, citizens of the euro area have been able to make cash payments within and across all 12 countries from a single purse, using the single currency, as easily as with the previous national banknotes and coins. Yet what is now reality for cash payments is still largely a vision for cashless payments. In the area of large value payments, systems such as TARGET and Euro1 are already offering EU-wide services. In the area of retail payments, however, the situation is very different and the fragmentation of the payment landscape is clearly visible. The introduction of the euro as the single currency will be completed only after the Single Euro Payments Area (SEPA) becomes a reality, i.e. when individuals and corporations are able to make cashless payments in the euro area or in the EU as easily, efficiently and safely as they can make them today at the national level.

The SEPA goal is shared by all stakeholders: the banking industry, user communities and political authorities. An important step towards the SEPA was the Regulation 2560/2001 on cross-border payments in euro, adopted in December 2001.[39] The Regulation eliminated the difference of price between cross-border and national payments. After the adoption of the Regulation, the payment service provider sector (mainly the banking sector) activated and established a common decision-making body, the European Payments Council (EPC), to foster the development of the SEPA. In 2002, the EPC published a White Paper where measures and steps towards the SEPA were presented. This paper set a goal for the SEPA to be achieved by the end of 2010. Thereafter the EPC expressed its conviction that a critical mass of transactions will have migrated to the SEPA payment instruments by 2010. However, there are still diverging views on how and when this goal will be achieved and, despite encouraging progress in the preparatory work; the fruition of the SEPA appears to be a long way off. In particular, there is still no harmonisation of standards in cashless retail payments that remain predominantly based on national payment schemes and consequently national retail payment clearing and settlement infrastructures remain segmented by country.

[39] For the complete text of the Regulation, see Official Journal of the European Communities (2001).

In the SEPA debate, the key policy question has been how to facilitate the interoperability of the current national retail payment systems and/or to create pan-European system(s) in order to offer customers an efficient pan-European service level through out the EU. The underlying factor for the debate is that many national retail payment systems are already functioning efficiently; what have been lacking are efficient cross-border retail payment systems that can contribute to the process of deepening financial integration in the whole area. In this context, it has frequently been emphasised that, in order to reap the full benefits of a common currency, further integration in retail payments area is inevitably needed. Some changes are consequently required even in the most efficient national systems of today as the whole process is dynamic and forward-looking in its nature. The proper ways and tools how to achieve these goals have, however, been disputed and rather divergent views have been presented by different stakeholder groups.

The aim of the present paper is to contribute to this debate and to try to shed light into the following questions: How to promote integration of European retail payment systems? Are there special factors in the area that should be taken into account? Can economic theory give some guidance? What kind of policy conclusions can be drawn? In answering these questions, we build our analysis on a framework adopted from the theory of network economics. We believe that the policy debate on the development of the European retail payment systems can be understood better by reviewing some lessons from the network economics. This is justified by the fact that the payment system industry inherently has many characteristics in common with network industries. In particular, the theory of network industries provides useful concepts and tools to analyse the interaction in *the competition-cooperation nexus* and regulation in retail payment systems.[40]

Our general analytical framework is the following: retail payment systems are analysed as networks and they are looked at as institutional and infrastructural arrangements for transaction, clearing and settlement processes.[41] Given this framework, we review briefly academic literature on networks and regulation of networks and assess their applicability to retail payment systems. Based on that, we then evaluate the European developments and discuss the potential policy implications.

[40] For a wider analysis on network characteristics of retail payment systems and their regulatory implications, see e.g. Kemppainen (2003, 2006). The theoretical parts of the present study are built on them.

[41] For an interesting analysis of the UK retail payment market, see Gangulny & Milne (2002).

More specifically, the paper is organised as follows. In Chapter 2, we lay down the theoretical background for our analysis of challenges in European retail payment systems. We shortly introduce the basic concepts in network economics. We start by presenting the main network features, like externalities, compatibility, and switching costs etc., and discuss their implications, e.g. tipping, path dependence, the chicken-and-egg problem, on the market structure of the retail payment systems field. In Chapter 3, we first describe and then analyse the network implications in the European retail payment landscape. In particular, we stress the change of focus, from national separate retail payment areas to one single payment area in the EU, in payment system developments and related challenges after the introduction of euro as a common currency. In Chapter 4, we look more closely at the roles and recent acts of different stakeholders in facilitating the creation of the Single Payment Area in the EU. In this context, motives of end-users, service providers as well as authorities are analysed. We put emphasis especially on the potential roles of public authorities in enhancing the formation of the Single Payment Area. Finally, in Chapter 5 we summarise our main findings and draw some policy conclusions.

2. Payment systems as a network industry

In a very simplistic way, payment systems can be characterised as networks connecting a payer and a payee enabling (cashless) monetary transfers between them. According to the theory of network economics, a central feature of networks is that network goods or services exhibit *network externalities* (also called *network effects* by some authors).[42] In a nutshell, this means that adding another customer adds value to the existing customers of the network. In this context, the telecommunication system has often been used as a demonstrative example. In fact, network effects and their implications on network industries have long been debated especially in telecommunication industry. The development of the systematic framework for their analysis was started in the mid 1980s by Katz & Shapiro (1985) and Farrell & Saloner (1986).[43] It has been stressed that networks play an integral part also in financial markets and in payment systems. For example, McAndrews (1997) analyses network effects in payment systems and defines a network good or service as having two main characteristics:

(i) the value a person gets from the product increases as more people consume it
(ii) the technique a firm chooses to produce the product will depend on the technique chosen by other firms.

Both these characteristics can be identified in the retail payment service provision. Concerning point (i), the more widely a payment instrument is accepted (because it has so many users), the more benefits it brings to a consumer using it (*demand side externality*). Concerning point (ii), economies of scale in production of payment services foster industry's willingness for cooperation (common standards, joint network ownership) in providing these services (*supply side externality*). Naturally, both these characteristics cannot be observed in their pure forms in real life. However, for example, in the adoption process of payment cards and in mergers of ATM-networks they have clearly played a major role.[44] In the following, some further key concepts related to network industries are briefly discussed.

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[42] This study uses both terms (network externality and network effect) in interchangeable way.

[43] For a summary analysis of the basic structures of networks see e.g. Economides (1996).

[44] See, e.g. Saloner & Shephard (1995) for an empirical analysis of network effects in ATM-markets.

2.1. Main concepts and characteristics in network economics

2.1.1. Complementarity and compatibility

In network markets, there are *complementarities* between users and/or products, which give rise to network externalities. These network externalities can be classified into two types: *direct and indirect externalities* (e.g. Katz and Shapiro 1985, Economides 1996). Direct network externalities are generated through the direct effects of the number of the agents consuming the same product, whereas indirect network externalities arise when the value of product increases as the number of the complementary goods or services increases (sometimes also referred to as the hardware-software paradigm). In retail payment systems complementarity plays an important role. For example, in credit card systems the complementarity is straightforward: as more people use credit cards, more merchants are induced to add terminals, since allowing customers a convenient means of payment will potentially increase their sales, and as more merchants permit card payment, the value to the customer of having a credit card increases too (McAndrews 1997).

Along with complementarity, *compatibility* between products is also essential for the existence of network externalities. In essence, for complementarities to be exploited, interaction channels are needed: it is necessary that products, users, or systems can interact. This means that complementary products or systems must operate on the same or compatible standard. According to Economides (1996), it is compatibility that makes complementarity actual and is thus crucial in network industries. In payment systems, compatibility can, in principle, be achieved by adherence to technical standards. However, it should be emphasised that "*technical compatibility*" does not necessarily mean that different systems or actors can truly interact. The interaction can be limited by exclusive rights that hinder the interaction. What is also needed is "*commercial compatibility*" that ensures that technically compatible products or systems really can interact because it is possible to limit the potential interoperability by specific operating rules or entry requirements to systems. In practice, compatibility at the system level is of crucial importance in enabling interoperability of systems, e.g. ATM-systems.

2.1.2. Economies of scale in production

It is often argued that payment systems are subject to economies of scale because of the significant investment in infrastructure needed to start the operation (large fixed costs) and a relatively small marginal cost for services produced over the existing infrastructure. Very large economies of scale in both retail and wholesale payment systems has been reported in Khiaonarong (2003), for example. As in the case of traditional industries, this supports the existence of large production units. This argument is of relevance e.g. for electronic payment transfers processed by an automated clearing house where a sufficiently large volume of payments is a prerequisite for the establishment of such system.

Consumption externalities

A consumption externality can be defined as the utility increase that a user derives from consumption of a product as the number of other users who consume the same product increases. Some authors, e.g. Guibourg (1998), have labelled this as "demand side economies of scale". In this context, consumers' expectations about the future size of the network are a decisive factor in the actual size that the network achieves. This means that consumers' expectations are often self-fulfilling: the larger the network, the greater number of additional customers who would like to join it; and conversely, the smaller the network, the less attractive it is to new customers. In retail payment services, these consumption externalities are clearly present. Any payment system, like a giro system, is of no value for a customer if no other customer is participating in the system. In establishing new payment systems or instruments, consumers' expectations of the future size of the payment network are also crucial. In practice, the difficulty of achieving a critical mass of users tends to limit the adoption of new payment instruments.

Switching costs

In network industries, consumers and firms often have to face extra costs if they switch from one network to another. If high enough, these switching costs may effectively lock the user into the existing system and provide barriers that prevent them from entering into another network. Switching cost may lead to inefficiency by preventing users from adopting a new superior technology. They may also support monopolistic pricing practices.

According to Shy (2001), switching costs can be significant in many service industries including banking. From the customers' point of view, the costs associated with switching between banks (i.e. closing an account in one bank, and opening an account and switching the activities to a different bank) could be significant. Accordingly, some sort of lock-in effect may prevent customers from frequently switching among payment service providers. Also from the payment service providers' point of view, switching costs can be significant: e.g. upgrading or changing to a new payment system may require large investments in computer systems and training.

2.2. Basic market structure implications in network industries

The basic features in network industries described above bring along specific market structure implications that can typically be seen in many network industries. In the following, we will discuss them shortly.

Tipping
In network markets, market dynamics may lead to extreme outcomes where one network good or service provider dominates the market. Besen and Farrell (1994) label this phenomenon as "tipping".[45] The existence of one dominant system can be explained by the economies of scale in production and positive demand side externalities. This "tipping" –phenomenon can also be seen in retail payment systems. At the national level, it is common that only one major retail payment system exists. In some cases, two or more systems may exist in parallel but they are often dedicated to different payment instruments (e.g. paper-based vs. electronic). However, enough heterogeneity in demand for different payment instruments may enable the existence of more than one retail payment system.

Excess inertia / excess momentum
Network markets may tend to get locked-in to obsolete standards or technologies. This *excess inertia* means that users tend to stick with an established technology even when total surplus would be greater were they to adopt a new but incompatible technology (Katz and Shapiro 1994). This can be explained, as pointed out by Farrell and Saloner (1986), by the fact that today's consumers may be reluctant to adopt a new technology if they must bear the cost of transition from one technology to the next, and if most of the benefits of switching will accrue to future users.

[45] According to Besen and Farrell (1994), network markets are often "*tippy*". This means that the coexistence of incompatible products may be unstable, with a single winning standard dominating the market (*tipping*). The dominance of the VHS videocassette recorder technology and the virtual elimination of its Betamax rival is often used as an example.

On the other hand, Katz and Shapiro (1994) argue that network markets may also exhibit the opposite of excess inertia, which they call "insufficient friction" (also referred to as *excess momentum)*. The market may then be biased in favour of a new, superior, but incompatible technology. Katz and Shapiro call the reason as "stranding": today's buyers may ignore the costs they impose on yesterday's buyers by adopting a new and incompatible technology. Accordingly, those who previously bought the old technology are stranded. Both effects are also possible in retail payment service markets, but as in many network markets, excess inertia is normally the dominant characteristic. An example is the slow e-money adoption where the service providers have long waited for its start-up but customers have been reluctant to start to use it.

Path dependence

In network markets *history matters*: network market equilibrium cannot be explained without reference to the pattern of technology adoption in the earlier periods.[46] This means that the effects of decisions by early adopters on the decisions of later adopters are often significant in network markets. In payment systems, path dependence can be seen in the development of national payment systems and, especially, in the slow change of national payment habits. For example, the division of giro- and cheque countries in the European Union is still prevailing, and probably mostly due to historical reasons.

Critical mass and chicken-and-egg problem

Critical mass or installed base of network facilities plays a crucial role in the start up and growth of a network. The start up problem is often referred to as the *chicken-and-egg* problem: many consumers are not interested in purchasing the good because the installed base is too small, and the installed base is too small because an insufficiently small number of consumers have purchased the good. Accordingly, the potential problem for the payment system development is that a new, more efficient payment system may not attract enough customers to validate its existence.

Underproduction

Network effects may also lead to possible *underproduction* of network goods or services. According to McAndrews (1997), the market production of network services may often be inefficiently low because using a network

[46] See e.g. Liebowitz & Margolis (1995).

imposes a (positive) external effect on other users of network, an effect the users typically disregard in making their decisions. For example, when deciding whether to join a service network, consumers do not take into account the benefit to other users of that larger network. Accordingly, the equilibrium network size is smaller than the social optimum, when social benefits of joining a network exceed the private benefits. In the retail payment systems area, where economies of scale are also present at least in the electronic payments, some authors (e.g. Gowrisankaran and Stavins (2002)) have argued that the underproduction is a relevant problem and it should be influenced by actions of relevant authorities.

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3. Network implications on the European retail payment landscape

When looking at the potential network implications on the European retail payment landscape, the following background factors are useful to keep in mind. The payment systems in the European Union were originally created to meet domestic requirements. As a result, the current landscape of the European retail payment market is characterised by considerable fragmentation, diversity of standards and different levels of efficiency in national systems. The development efforts of retail payment systems were normally (and quite justifiably) directed to respond to needs of domestic payment traffic: the vast majority of retail payments were national. In fact, even today only 2–3 % of all retail payments are cross-border payments – a fact which may of course reflect the inconvenience of cross-border payments more than lack of potential demand. A fundamental question here is whether there is no demand for cross-border payment methods because there is inadequate supply of them, or is it *vice versa*. In any case, the situation has many characteristics of the traditional "chicken-and-egg" problem. Judged from the pan-European viewpoint, it can, however, be argued that the lack of efficient cross-border payment methods and systems should in no case act as an impediment to cross-border business transactions no matter how big or small these transactions would be. The borderless pan-European payment landscape is the sub-target of financial market integration process and the true Single Markets in the spirit of the Lisbon Agenda.

With the introduction of the Single Market concept in 1992 and even more concretely so with the introduction of the common currency, the euro, the focus of the relevant payment market has changed from national to euro area / EU. The Single Market in goods and services inevitably needs payment systems that also operate smoothly and efficiently in the whole context of the market. In the following, we will make a short review on the European developments.[47]

[47] For a comprehensive analysis of financial market integration in the EU, see e.g. Koskenkylä (2004).

Viewed from historical perspective, cross-border retail payments and their pricing have attracted the attention of the EU policy-makers ever since the introduction of the Single Market –concept in 1992. Since then the development in the European retail payment markets has been monitored by the public authorities. According to the pricing surveys by the European Commission[48], service providers had been very slow in making any progress in the cross-border retail payments field. The prices of cross-border payments had remained at high levels and their execution times a lot longer compared to domestic retail payments, even on the eve of introduction of the euro notes and coins. The reasons for this slow progress are many-faceted. On the one hand, payment service providers have emphasised that "there is no business case" to develop and invest in new cross-border retail payment infrastructures because there is not sufficient demand for these services. On the other hand, the authorities and consumer associations have maintained that the high prices are the principal obstacle to activating and expanding the demand for these services.

A variety of infrastructural factors may also have delayed the development of efficient cross-border retail payment systems in Europe. One of the main factors is the existence of different national payments systems, which have developed within different historical contexts, with different governance, access, pricing and transparency traditions as well as different legislative environments. As a result, the retail payment infrastructure in the European Union is fragmented and it is still largely based on traditional national payment habits and characteristics. Figures 1–4 provide two illustrative snapshots of the situation.[49]

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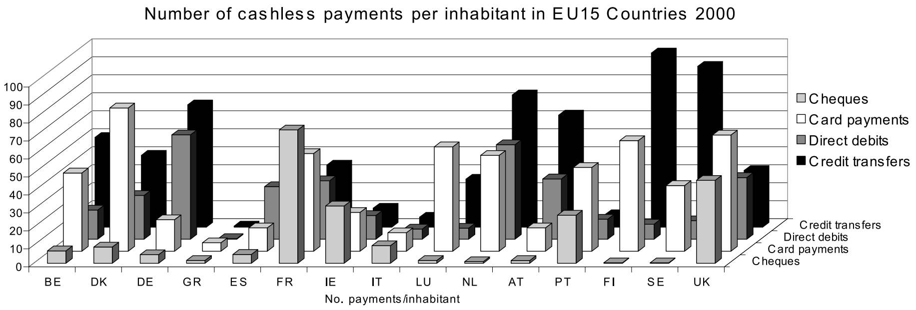
[48] See the Commission's website: http://europa.eu.int/comm/internal_market/payments/crossborder/index_en.htm; Retail Banking Research (2005a, 2005b)

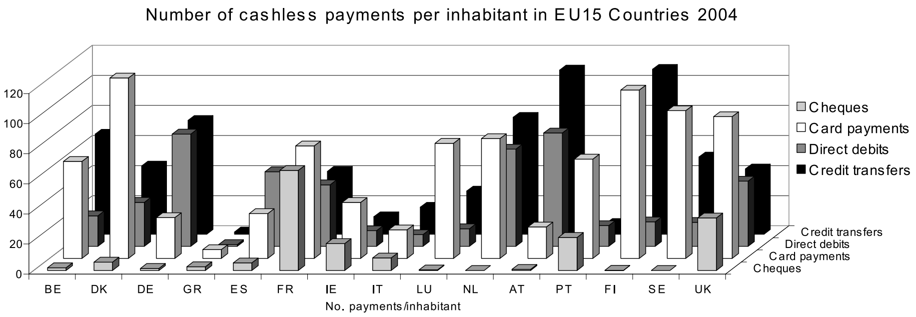
[49] For a comprehensive analysis using this kind of framework, see Leinonen (2001).

Fig. 1. Number of cashless payments per inhabitant in EU15 countries, 2000



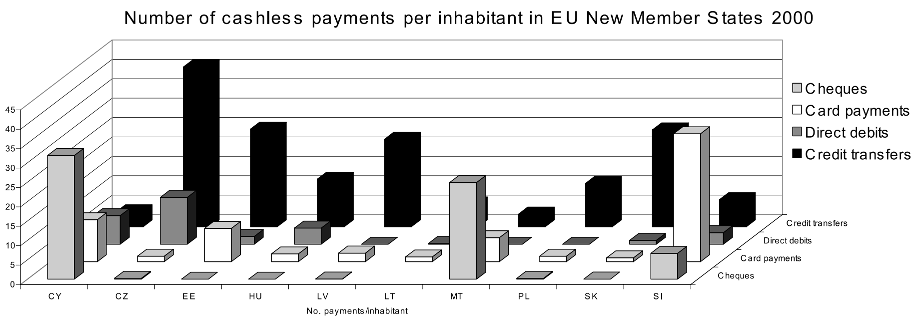
Data source: ECB (2006b)

Fig. 2. Number of cashless payments per inhabitant in EU15 countries, 2004



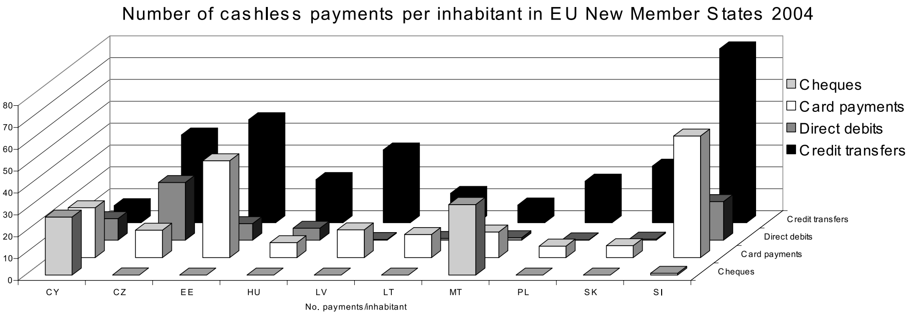
Data source: ECB (2006b)

Fig. 3. Number of cashless payments per inhabitant in new EU Member States, 2000



Data source: ECB (2005)

Fig. 4. Number of cashless payments per inhabitant in new EU Member States, 2004



Data source: ECB (2005)

In Figures 1–4, the fragmented structure of retail payment methods in the EU countries can be clearly seen. The figures also illustrate the fact that payment habits are slow to change. In some countries, like France, the cheque continues to be an important payment method even though its relative share has been declining in recent years. In other countries, like Finland, credit transfers are dominating and cheques have virtually disappeared. Naturally the differences in payment methods used in different countries are reflected in the structure and organisation of payment systems in these countries. In the new Member States, the fragmentation of cashless payment methods is also present but in many cases the high use of credit transfers and card payments is noticeable.

Generally speaking, the development of payment system infrastructures in different countries is likely to have been influenced by some sort of *path dependence*[50] ("history matters") where the key ingredients are the structure of service providing sector, national payment traditions and legislative environment. Consequently, each national payment system has its own membership criteria, standards and practices that have evolved over time. Figures 1 and 2 provide an illustrative example of rather "strong" path dependence in the EU15 countries. In contrast, a nice example of the "weaker" path dependence for the new Member States can be seen in Figures 3 and 4: many of the new Member States have very rapidly been able to adopt the most efficient payment methods – probably partly so because of the lighter burden from the historical systems. In addition, another factor

[50] The most well-known but nowadays also disputed, example in the context of efficiency and path dependence is the QWERTY-keyboard system.

affecting the development of national payment systems is the observation that *payment habits are slow to change*. This applies especially to consumers, and, to a lesser extent, also to enterprises. It is obvious that these factors have affected the development of payment systems, but, only the coming years will tell, if the development of payment transfer technology, accelerating financial integration and deepening global financial linkages will change the picture.

Figures 1–4 support also the argument that the retail payment infrastructure in the EU consists of *25 distinct payment areas* even though some convergence has taken place. In this context, it has been claimed that the present heterogeneity in the retail payments field can potentially hinder the development of efficient cross-border retail payment systems. The idea behind this argument is that the heterogeneity in demand for different payment instruments in different countries makes it more difficult to develop truly compatible payment systems or one common cross-border system because of different national needs. On the other hand, the formation of *Single Euro Payments Area / a Single Payment Area in the EU* may not necessarily mean that the national payment habits and methods should be totally harmonised; more important is that reliable and efficient cross-border retail payment methods and systems can be established. Even if, in the long run, the goal is to phase out the purely national and non-interoperable payment systems (at least regarding credit transfers, direct debits and card payments) and replace them with the common euro area wide systems which are defined in the context of the SEPA project, the national payment habits and preferences will of course be free to determine the market shares of the different payment methods available. However, it should also be recognised that changes cannot take place very rapidly because path dependence is quite strongly present in payment service business which is further supported by excess inertia and switching costs both on demand and supply sides.

When further examining the situation at the cross-country level, the following observations can be made. As stressed above, the current national/domestic retail payment systems are the results of development processes that have been strongly guided by "the national payment habits" and, therefore, the organisation and operating procedures of national retail payment systems differ from each other. In some countries, the degree of electronification in retail payments processing is high and the retail payment systems function (technically) efficiently[51]. In this context, one important factor contributing to

[51] Naturally, technical efficiency does not necessarily imply economic efficiency, e.g. if monopolistic pricing distorts users' decisions resulting in under- or overuse of the service.

the efficiency in national payment systems has been *standardisation*. Standards in retail payment systems have traditionally been set domestically by national authorities and banking associations. Accordingly, the standardisation process at the national levels has benefited from relatively small and homogeneous stakeholder groups. However, standardisation at the cross-border level has been more of a problem because of the greater number of different parties involved and strict adherence to heterogeneous domestic standards adopted in different payment methods. This has surely slowed down the development and implementation of international retail payment standards, which has, in turn, negatively affected the establishment of efficient cross-border retail payment systems.

Another factor affecting the slow development of cross-border retail payment systems in the EU is the low volume of cross-border retail payments. These payments account currently for 2–3 % of all retail payments in the EU. Whether this figure will increase in the future naturally depends on customers' needs, but also on the existence of efficient cross-border retail payments systems to execute payments reliably and cheaply. The establishment of such an infrastructure will require cooperative efforts by the service providing sector. However, as pointed out in the beginning of this section, the service providing sector may be unwilling to invest in these systems if it does not see it as a profitable business. Accordingly, a sort of chicken-and-egg problem may further delay the establishment of efficient cross-border payment systems.

Competition-cooperation nexus

In the European retail payment landscape and especially in the development of cross-border retail payment systems, the competition-cooperation nexus has been observable. The following quotation ECB (2001b)[52] nicely reveals the challenges that the competition-cooperation nexus brings along:

"*The <u>lack of competition</u> among banks explains the lack of progress with regard the price level of cross-border credit transfers, whereas <u>the lack of co-operation</u> on standards and infrastructures explains the lack of progress in reducing the cost of processing cross-border transfers.*"

[52] ECB (2001b): *Towards an Integrated Infrastructure for Credit Transfers in Euro,* page 4, November 2001.

Naturally, the quotation must be looked at in the light of the policy debate that was going on in that time concerning the Regulation of retail payment prices but it also clearly presents the competition-cooperation nexus in the provision of retail payment services. On the one hand, cooperation among service providers is needed on establishing standards and infrastructures in order to have a large enough customer base for their services ("*network effect*"). On the other hand, agreement on common standards (compatibility) increases competition and may thus reduce service providers' incentives for the increased compatibility ("*competition effect*"). Accordingly, the crucial question for policy-makers and regulators is to find measures that maximise social welfare in this type of environment.

The competition-cooperation nexus is directly connected to the stylised market structure in retail payment markets where the vertical structure of industry is common. Accordingly, the basic framework of retail payment industry can be generalised as follows:

Payment service providers compete directly in the provision of retail payments instruments and services to end-users but, at the same time, they also cooperate in shared payment networks.

In other words, it can also be said that there is "*upstream cooperation combined with downstream competition*"[53]. This poses several challenges to public authorities. On the one hand, viewed from the efficiency standpoint, it is desirable to facilitate the utilisation of economies of scale by means of allowing cooperation between market players. On the other hand, there is also a risk that such cooperative arrangements may be anti-competitive. From a competition policy point of view, it is possible that cooperation at one level may lead to collusive behaviour at another level. For payment system regulators, these are crucial concerns in assessing the trade-off between competition and cooperation. In this context, straightforward application of economic theory will need to be supplemented by taking into account all the industry-specific characteristics.

In general, it has been argued that market competition is the way to promote efficiency in many traditional industries. In retail payment markets, a particular characteristic is, however, that competition among market participants needs to coexist with the mutual cooperation in payment system

[53] McAndrews & Rob (1996)

infrastructure arrangements. In this context, a key issue is whether the service providers are able to achieve an adequate balance between competition and cooperation to benefit market users. Therefore, public authorities should consider whether the market structure supports innovation and new market entrants, and whether existing access restrictions serve to promote or impede competition and contestability.[54]

In retail payment systems, cooperation is required among market participants in the context of their participation in payment system infrastructure arrangements. The main issue for regulators is then whether this cooperation supports market efficiency. The BIS (2003) report argues that established payment networks are a typical context in which this issue will arise. They have the potential to provide a stepping stone for innovation but they are also in a position to create entry barriers that impede competition and innovation. In protecting their own interests, members of established payment networks can create entry barriers either by imposing access restrictions or by more indirect means, for example by a choice of standards and rules that are inappropriate, difficult or costly for other payment initiatives to adopt.

A related question is whether competition between different systems or competition in one system is better for overall market efficiency. If excluded entrants to a particular system decided to establish their own system that was more efficient and they are also able to attract enough customers for the new system to survive, market efficiency could be fostered. However, the uncertainty in reaching the critical mass of users may make the establishment of the new system difficult. Also, the co-existence of multiple systems and standards may imply extra costs both for the users (imperfect compatibility) and the service providers (unutilised scale economies). This clearly points out the importance of market dynamics in network industries that strongly affects the market structure.

[54] For a comprehensive analysis of public policy issues in payment systems. see BIS (2003).

4. Roles of different stakeholders in developing Single Payment Market

In principle, the key parties that are involved in the development process of retail payment systems can be grouped into three groups: *(i) End-users*, *(ii) Payment service providers*, and *(iii) Regulators*. In the following, their motives and roles are discussed. In addition, their recent acts are presented in the European context.

(i) End-users

In retail payments, customers (i.e. consumers and enterprises) are the end-users of the payment services. Accordingly, their behaviour (usage decisions) finally decides which payment instruments (and respective payment systems) survive in the long-run. Especially, their adoption patterns of new payment instruments play an important role in shaping the future payment systems. As in many other network industries, end-users' expectations about the future overall usage of different instruments affect the actual adoption of these instruments also in retail payment systems. Ideally, some sort of form for "coordination of expectations" would be important, because users need to form their expectations (and their respective decisions) on which technology will be widely used by other users. The practical problem is that very often the decision of which payment method is chosen depends on the present price and availability of usage points of the payment instruments. When the present users are few and the price is high, a new payment method has a lot of difficulties to achieve the critical mass needed to utilise potential economies of scale in its production and thereby validate its existence. In a practical context, the previous observation that "the payment habits are slow to change" is also relevant when new payment methods are introduced to customers. Accordingly, the adoption incentives of end-users[55] surely play an important role in fostering efficiency of retail payment systems.

(ii) Payment service providers

The banking sector has traditionally been and still is the main payment service provider even though some new service providers are now emerging. As in any

[55] It is worth noting that in recent SEPA discussions the importance of the end-users' needs have been emphasised.

other industry, appropriate incentives for innovation ("need for the existence of a real business case" as many bankers have phrased it) are crucial when establishing payment infrastructure. Therefore, without sufficient innovation incentives, the development of efficient infrastructure is doomed to be slow. In the context of European cross-border retail payments, the banking sector has emphasised that the slow development of the systems was due to low demand for these payments and the consequent lack of a real business case. However, after the adoption of the Regulation on Cross-border Payments in Euro (2560/2001), the banking sector "was forced" to act.[56] As a direct reaction, the banking sector established the European Payments Council (EPC) in June 2002 to represent the industry and to support and lead the development of *the Single Euro Payments Area (SEPA)*. Moreover, the EPC also published a White Paper: *Euroland: Our Single Payment Area!*[57] and it has continued its work towards SEPA by adopting Rule Books on credit transfers and direct debits as well as SEPA Cards Framework. The European banking sector has signalled that they are prepared to move forward the necessary harmonisation of payment systems and instruments, as much as possible through self-regulation. In their opinion, legislation and regulation should only be used where the harmonisation cannot be achieved by other means.

(iii) Regulators

In the EU/Euro Area, the main regulators in the payment service field are the European Commission and the European Central Bank (ECB)/ the European System of Central Banks (ESCB) along with the relevant competition authorities. Next, their respective, partly overlapping, roles are discussed.

<u>The European Commission</u>

When fulfilling its role in promoting the development of the Single Market, the European Commission has been active in facilitating financial market integration. Since the beginning of the 1990s, the Commission has been arguing that high costs for cross-border money transfers are inhibiting the Single Market development and financial market integration. In this context, the Commission has formulated the following objectives for the single payment area:

- to make the Internal Market the domestic market
- to promote efficient and secure payment means and systems

[56] A theoretical analysis on the potential effects of the Regulation on cross-border payments in Euro can be found in Kemppainen (2005).

[57] European Payments Council (2002): "*Euroland: Our Single Payment Area!*", May 2002. http://www.europeanpaymentscouncil.org.

- to enhance customer protection and strengthen consumer confidence relating to all payment means
- to ensure competition on equal terms in a level playing field.

In pursuing these goals, the Commission has assumed a more active role in recent years. The fact that the charges for cross-border retail credit transfers had remained high over the years prompted the European Parliament and the Council to adopt Regulation (EC) No 2560/2001 on Cross-border Payments in Euro in December 2001. The Regulation aims at facilitating the expansion of the *"Single Market" concept* to cover the money transfers and payment systems markets as well. The adoption of the Regulation was seen as the ultimate tool to foster the development of the market where, according to the Commission, "no substantial development efforts by market participants" were observed before that. In December 2005, the Commission adopted a proposal for a Directive, earlier known as *New Legal Framework (NLF) for Payments in the Internal Market*. This proposal for a Directive of the European Parliament and of the Council on payment services in the Internal Market should establish a modern and comprehensive set of rules for all payment services in the European Union and form a comprehensive legal basis for SEPA developments.[58] Parallel to this directive proposal, the Commission has also issued the so-called *SEPA Incentives Paper* (nowadays referred to as "Next steps") that analyses the current situation and identifies a number of areas and issues where supplementary action may be required to achieve the full economic potential of SEPA.[59] Very recently, the Commission also launched a public consultation on the *Interim Report on Payment Cards and Payment Systems*. According to the Commissioner Kroes, the inquiries are an important first step in allowing the Commission to identify ways to improve competition in EU financial markets.[60]

European Central Bank and the European System of Central Banks

The central banks' interest in the efficiency of payment systems is based on the Article 105(2) of the Treaty and the Article 22 of the Statute. According to these, *the European System of Central Banks shall promote the smooth operation of payment systems*. This also includes facilitating and ensuring the

[58] For more information on the Directive proposal and the earlier initiatives, see the Commission's web page:
http://europa.eu.int/comm/internal_market/en/finances/payment/area/index.htm

[59] See the Commission's webpage:
http://europa.eu.int/comm/internal_market/payments/sepa/index_en.htm

[60] See, DG Competition's web page:
http://europa.eu.int/comm/competition/antitrust/others/ sector_inquiries/financial services.

efficiency of payment systems. In addition to general efficiency, the central banks have also defined financial integration as one of their main objectives. In the beginning of 2005, the ECB and the national central banks agreed on a document of "Strategic intents of the Eurosystem". This document gives a high priority to unification of financial systems, and, by implication, the payment systems as well. The relevant phrase in the document is as follows: "*The Eurosystem shall aim to safeguard financial stability and promote European financial integration in cooperation with the established institutional structures*." As such, this document did not mark any change in the ESCB policy. But it confirmed that for the ECB and the Eurosystem as a whole, promoting financial integration is not only a means to an end, it is also a goal in itself.

In the area of retail payment systems, the Eurosystem has focused on the importance of providing efficiency and safety standards for retail payment instruments and euro retail payment systems with the aim of fostering the achievement of a single euro payment area. In principle, both the safety and efficiency targets are important, and in many cases, as in the large-value payment systems where potential for systemic risk is bigger than in retail payments, the safety requirement is the first one to be achieved. However, in retail payment systems as well, the same safety requirement is important as the central banks should also ensure that the public confidence in payment media is not put in danger in any circumstances.

The ECB/ESCB has communicated its policy stance on retail payment issues by publishing various reports and studies. The ECB has published two reports "*Improving Cross-Border Retail Payment Services – the Eurosystem's view* (September 1999) and *Improving Cross-Border Retail Payment Services – Progress Report* (September 2000) in which it highlighted inefficiencies and set objectives for cross-border retail payments. Moreover, the ECB Monthly Bulletin article in February 2001 *Towards a Uniform Service Level for Retail Payments in the Euro Area* examined the variety of issues in retail payments area. In November 2001, the ECB prepared a report *Towards an Integrated Infrastructure for Credit Transfers in Euro*, in which it reviewed ways to remove obstacles that are the origin of the high costs of retail cross-border credit transfers and provided an overview of measures to improve the payment infrastructures. The ECB reports *Towards a Single Euro Payments Area – Progress Reports* (ECB, 2003, 2004, 2006a) assessed developments achieved in retail payment system field. In the reports, the Eurosystem's strong support for the banking sector's Single Euro Payments Area –project was emphasised. Moreover, the importance of the

Eurosystem's own catalyst and overseer roles were strongly stressed. In the latest Progress report, the Eurosystem's vision for the SEPA was clearly stated: "a euro area in which all payments are domestic, where the current differentiation between national and cross-border payments no longer exists."[61]

Altogether, one of the most essential future tasks for all the key parties, including both service providers and regulators, involved in the development of retail payment systems is to strengthen their cooperation so that efforts can be focused on the most relevant issues and overlapping development efforts can be avoided. On the regulatory side, the cooperation between the European Commission and the ECB/ESCB is crucial in order to avoid the situation where too extensive and overlapping regulation would act as an impediment to the development. Furthermore, the roles of competition authorities and other regulators (including central banks as overseers of the payment systems) in the quest for the market contestability and payment systems efficiency are not totally clear both at the national as well as at the European level. This is likely to require further cooperation efforts, at least at the European level.[62]

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[61] See, ECB (2006a) "Towards a Single Euro Payments Area: Objectives and Deadlines – a Fourth Progress Report", p. 4.

[62] A recent example of the increased authority cooperation is the joint statement from European Commission and the European Central Bank: "Single Euro Payments Area". See e.g. ECB's web page: http://www.ecb.int/press/pr/date/2006/html/pr060504_1.en.html

5. Conclusions

Given that the European retail payment systems display a very large degree of fragmentation and national idiosyncrasies, and that for the EU authorities and the central banks financial integration is of a very high priority, it is only natural to expect that the authorities seek ways to promote further integration in this field. Even though financial integration is now defined as a goal in itself, it should also be clear that well-functioning and integrated payment system is a necessary condition for the existence of a truly single market, both in financial services, and in other retail markets as well. This is of utmost importance for reaping the full benefits of the common currency. A successfully conducted and implemented integration process will lead to a situation where no "national payment borders" exist anymore and the most efficient and reliable payment methods and systems are adopted EU-wide. Furthermore, integrated and efficient retail payment market will contribute to the realisation of the Community's Lisbon agenda.

The Single Euro Payments Area project aims to contribute to the Lisbon agenda on its own part. Ideally, the SEPA-project is a market-driven process where the authorities ensure a level playing field for different service providers. Currently, there is a strong political commitment to SEPA-project but some practical difficulties have arisen due to the differences in national payment habits and systems. The evident path dependence in developing payment systems and other vested interests of payment service providers may make the process challenging, but the commitment of all the stakeholders to achieve the final goal will help to overcome the potential obstacles.

When examined from the general payment system policy point of view, the arguments reviewed in this paper reveal the complex and many-faceted nature of retail payments that has clear repercussions on the retail payment systems and their developments. The network characteristics present in retail payment systems should be recognised and taken into account by all stakeholders in the field. This implies, for instance, that the national differences we observe today do not necessarily reflect differences in national preferences of technological possibilities. Rather, as we pointed out above, they can also be explained to be just the result of historical development – the "path dependence" that is typical for network industries. This observation challenges one of the possible objections to unification, the statement that the same payment system or fully interoperable payment systems with broad menu of common instruments could not suit all countries' needs.

The other objection raised by payment service providers, namely the lacking business case, is also likely to be based on too a narrow and limited view of the total impact of European integration. In general, the deepening economic integration process will inevitably increase cross-border trade. In particular, if we recognize the importance of the payment infrastructure for the contestable markets for retail goods and services, we may also predict that increased interoperability and/or unification of the payments systems facilitating more efficient payment services will lead to a significant growth of cross-border transactions. The current home country bias of payment traffic is, at least to some extent, a product of a fragmented payments infrastructure. Unified payment system infrastructure and common payment products can surely remove potential barriers for cross-border business as well as retail transactions.

All the above observations, along with the general characteristics of network markets, suggest that an optimal degree of efficiency and integration may not be achieved by markets themselves without some intervention by the authorities. The appropriate nature and scope of this intervention is a much more difficult question, however. In principle, the authorities have several options available for regulating the retail payments market.[63] They can **leave development to the market** and aim simply to foster a competitive environment and facilitate investment incentives in the field, e.g. by assuming a tolerant attitude towards payment system joint ventures and other types of cooperation. They can also **act as a catalyst or facilitator for development,** e.g. by participating in the development of payment standards and supporting the work of cooperative groups formed within the industry. As a stronger measure, they can **resort to specific regulation** to influence market development, e.g. enforcement of standards. Finally, as the ultimate measure, the authorities can **become 'operationally active'** by establishing their own systems for providing payment services. However, this last option should only be used when the authorities judge that reliable and efficient payment systems cannot be provided by the market.

[63] For an extensive analysis on the policies relating to the efficiency and safety of retail payments, especially from the viewpoint of central banks, see BIS (2003). For a comprehensive discussion on central bank oversight of payment and settlement systems, see BIS (2005).

A general conclusion we would like to draw from our review is that authorities must promote some form of coordination among market participants. Inevitably, compatibility and interoperability of different retail payment systems by means of common and open standards are needed to exploit the potential economies of scale. Moreover, the network structure of the industry (upstream cooperation combined with downstream competition) would ideally facilitate the efficiency gains. Therefore, the authorities should not take too restrictive an attitude towards cooperation among payment service providers. Indeed, they probably should adopt a more active role as catalysts for the beneficial forms of cooperation and coordination.

However, the authorities also have a regulatory role to play. They must continuously monitor the market and ensure that cooperation among service providers does not lead to anti-competitive practices which would harm the end-users of payment systems. First and foremost, this involves monitoring and assessing access conditions to payment systems and memberships of organisations developing and operating them. The systems must be open and entry of new service providers must be possible without discriminatory fees or other unfair conditions. However, entry/access conditions must also be formulated so that payment systems and their operations themselves do not jeopardise the financial stability.

The other difficult part of entry/access regulation is of course to practice it so that it does not reduce incentives to innovate and develop new services or technological solutions. Innovators must be allowed to reap profits for their work. In other regulated industries, there have been very thorny cases, and it is only natural to expect that they emerge also in the area of payment systems in Europe. The problem is not only how to determine fair terms of access, but also to delineate the forms of permissible cooperation, in which the fair access requirements are imposed. The broader the range of activities where common organisations and joint ventures are permitted, the more difficult the questions of fair access become.

To sum up our main policy message, the following can be concluded. We note that the practical challenges for authorities and private operators alike should not be underestimated. Banks and other operators must prepare themselves for the technical changes and marketing tasks required by the harmonisation of payment products and the inevitable unification of the European payment systems. The authorities, for their part, must also develop new competencies. They must continuously monitor the markets and learn how to assess the developments in the market for payment services, and prepare to deal not only with difficult technical issues, but also with the even tougher questions of fair vs. unfair market practices etc. On the other hand, many of these challenges have already been with us for a long time at the national level. In the future we must deal with them at the European level, where the stakes are bigger, and transparency and peer pressure are more and more important considerations.

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