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GLOBAL FINANCIAL MARKETS AND FINANCIAL STABILITY: EUROPE'S ROLE

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ABSTRACT

Global Financial Markets and Financial Stability: Europe's Role*

Europe's contribution to the international financial system is a new currency, the euro. Economic and Monetary Union in Europe (EMU), of which the single currency is the manifestation, has emerged in the context of a complex process of interaction between globalization and regional integration. This paper discusses the internationalisation of the euro and draws out the consequences for European securities markets, exchange rates, and international financial stability.

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NON-TECHNICAL SUMMARY

What has Europe contributed to the international financial system? Neither leadership; nor new ideas for the 'international financial architecture'. Europe's contribution is evidently a new international currency: the euro.

The euro has emerged in the context of a complex process of interaction between globalization and regional integration. The rising international mobility of capital made monetary autonomy increasingly incompatible with fixed exchange rates and was a key stimulus to Economic and Monetary Union in Europe (EMU). Competitive pressures in the international capital markets are now promoting the integration of the euro capital markets; and the big global players are major forces on the demand and supply sides of those markets. Here we focus on the reverse channels through which European monetary integration affects globalization itself and the workings of the international financial system.

There are significant implications of this process for international financial stability. Many have said that the 'architecture debate' is fighting the last war – the next major international financial crisis will differ significantly from the Asian crisis of 1997–8. There are at least three important new aspects that we can foresee now: the next crisis

- will take place in a *bipolar* currency world
- may have been *caused* by a new kind of instability in the international financial system, created by the breakdown of dollar hegemony
- and may find its *resolution* as much in Frankfurt, Brussels, and Paris – perhaps even London – as in Washington

EMU is set to transform global financial markets and the financial environment facing investors and policy-makers in all countries. After half a century of domination in world monetary affairs, the dollar is facing competition from the euro.

This paper brings some analysis and evidence to bear on Europe's changing role in the global financial system and its consequences for other countries, especially emerging market countries, as well as for international financial stability. Among the conclusions that emerge are the following:

- The financial markets and the beliefs of market participants, as well as policy decisions, will determine the outcome of the dollar–euro 'competition'.

- With increasing global integration of financial markets, even major systemic changes could occur much more quickly now than in previous eras.

- Competition between currencies and securities markets will have repercussions in the foreign exchange markets.

- We can expect large portfolio shifts as the euro capital markets unify and approach parity with those in the United States; if the shifts become abrupt, there will be pressure for the euro to appreciate, possibly to overshoot.

- Within a year or two, we shall see a euro government bond market comparable in liquidity to that of the United States and substantially larger.

- There is already parity between euro and dollar issuance in the international bond markets and a major rise in euro issue size.

- Emerging markets will benefit from the growing liquidity of euro securities markets but may experience stiffer competition with euro-area issuers.

- But borrowers can now play off the euro market against the dollar market.

- EMU has already accelerated European equity market integration.

- A much larger, more liquid market will favour venture capital as well as junk bonds.

- The volatility of the euro real effective exchange rate is likely to be higher than that of the DM.

- As the euro emerges as an international currency, changes in interest rate differentials between the dollar and the euro are likely to have bigger effects on the exchange rate between them.

- Forex market and press disparagement of the ‘weak euro’ should be taken no more seriously than either the early 1998 exaggerated view that a wide euro would be a weak euro or the late summer 1998 exaggerated view that the euro would appreciate indefinitely.

- The fundamentals suggest some need for euro appreciation from its current level.

- The existence of two major capital markets is likely to make international portfolio allocation more responsive to shocks, with implications for systemic stability.

- Moves by smaller countries to dollarisation or euroisation could have far-reaching impacts on the international financial system and its stability.

Global Financial Markets and Financial Stability: Europe's Role

Richard Portes

November 1999

1. The euro, the dollar, and financial markets

What has Europe contributed to the international financial system? Not leadership; not new ideas for the 'international financial architecture'. Europe's contribution is evidently a new international currency: the euro.

The euro has emerged in the context of a complex process of interaction between globalisation and regional integration. The rising international mobility of capital made monetary autonomy increasingly incompatible with fixed exchange rates and was a key stimulus to Economic and Monetary Union in Europe (EMU) - the euro, Europe's single currency. Competitive pressures in the international capital markets are now promoting the integration of the euro capital markets; and the big global players are major forces on the demand and supply sides of those markets. Here we focus on the reverse channels through which European monetary integration affects globalisation itself and the workings of the international financial system.

There are significant implications of this process for international financial stability. Many have said that the 'architecture debate' is fighting the last war –

the next major international financial crisis will differ significantly from the Asian crisis of 1997-98, just as it differed from Mexico 1994-95 and the debt crisis of the 1980s. But no one has specified *how* the next crisis will be different. I believe that there are at least three important new aspects that we can foresee now: the next crisis

- will take place in a *bipolar* currency world
- may have been *caused* by a new kind of instability in the international financial system, created by the breakdown of dollar hegemony
- and may find its *resolution* as much in Frankfurt, Brussels, and Paris – perhaps even London – as in Washington

EMU is set to transform global financial markets and the financial environment facing investors and policy-makers in all countries. After half a century of domination in world monetary affairs, the dollar is facing competition from the euro. The potential international role of the euro is controversial. Some European politicians and economists have argued that EMU and the single currency offer an opportunity to challenge the dollar's hegemony in the international monetary system.[1] In the United States, policy-makers and academics are deeply sceptical that the euro could compete with the dollar in any significant way, even if EMU works out well. This may, however, be the obverse of the European desire to

[1] 'For European leaders (and especially the French), EMU was meant to result in a more assertive Europe, that would be equipped with an increased ability to speak "with one voice" on world economic and financial issues.' (Coeuré and Pisani-Ferry, 1999).

compete on the international monetary stage – Americans are reluctant to contemplate any threat to the dollar's supremacy.

Private-sector perceptions are even less clear. Probably the ordinary household or investor on either side of the Atlantic does not care whether the euro will displace the dollar in any of its attributes. Asians, Latin Americans and Africans are doubtless even less concerned. Views in the markets are diverse, indeed fickle. But market expectations will play a decisive role in the story: it is the markets, specifically the financial markets, that will determine the outcome of the dollar-euro competition. Those markets involve economic agents around the world, not just in Europe and the United States.

The process of competition among currencies and securities markets, closely linked to the integration of European capital markets, will have repercussions in the foreign exchange markets. Volatility and misalignment of the euro-dollar rate will not leave the yen unaffected. Indeed, the focus of market and policy discussion is likely to shift from dollar-yen to dollar-euro. Unless the yen continues to appreciate, the major current disequilibrium remains the American current account deficit juxtaposed with the euro-area current account surpluses; the global economy is accustomed to Japanese surpluses.

Moreover, movements of the three major currencies relative to each other will affect all other countries with any significant involvement in the global economy –

in finance or in trade. This is evident for countries with currencies that are pegged, hard or soft, to any of the three – witness analyses of the Asian crisis that attribute it to loss of competitiveness vis-à-vis Japan for countries pegged to the dollar. In fact, however, all countries find their terms of trade and competitiveness affected by large swings in the major currencies.

International financial stability is not just exchange-rate stability. Abrupt surges in capital flows have posed major problems for economic policy in many emerging market countries (Portes and Vines, 1997). We can indeed expect large portfolio shifts as the euro capital markets unify and develop towards parity with those in the United States. The range of choices will expand for borrowers as well as lenders. As risks and returns change, market participants will respond – and conversely, shocks to the fundamentals may be amplified in the international capital markets and show up, through major portfolio shifts, as disruptive influences on prices in domestic financial markets.

There is good news as well: if the problems of the international financial system are associated with unstable capital flows, at the same time these flows can be highly beneficial. The new euro-area capital markets can bring very good news to emerging market borrowers.

Some fear these changes in the structure of financial markets, however, citing the ‘hegemonic stability theory’ due originally to Keohane (1980) and the example of the instability of the interwar period, when the dollar was taking over

from the pound sterling. The standard economist's response is that more choice is always better – so if investors will have a serious European alternative to the American capital markets, all will be better off. On either view, the emergence of the euro will profoundly affect the international financial environment. Not only OECD countries, not only emerging market countries, but all participants in international finance and trade will find that the arrival and development of the euro will have consequences for their choices, their stability, and their prosperity.

This paper will therefore consider the likely changes in European and global financial markets consequent upon monetary union in Europe and the implications of these changes for international financial stability. Section 2 analyses the process of internationalisation of the new single European currency.[2] Section 3 discusses changes in the fixed income markets in Europe. The following section considers developments in European equity markets. With that background, Section 5 deals with cross-border portfolio shifts. In Section 6, we turn to the foreign exchange markets themselves and exchange rate stability. Section 7 asks what challenges appear for policy-makers, in particular but not only the European Central Bank. Section 8 concludes.

[2] The analysis of Sec. 2 is based on Portes and Rey (1998a).

2. Internationalisation of the euro

It does matter whether the euro achieves the status of international currency. Monetary supremacy confers substantial political benefits. The hegemon of the international financial system is better insulated from outside influence or coercion in formulating and implementing policy. It is also better able to pursue foreign objectives with fewer constraints. Only the issuer of the international currency has the privilege of financing its debts in its own money without effective limit. That not only protects it from exchange-rate risk but also, up to a point, means that movements in the current account of the balance of payments are of less concern to its policy-makers (which may in turn lead to 'benign neglect' of its exchange rate).

Moreover, the creator of international money – the United States, not the IMF – is the only true international lender of last resort, and that confers power in the international economy. Think of the key role of the US Treasury alongside the IMF in the Mexican crisis, the Asian crisis, Russia and Brazil. Where was Europe, except to help pay the bills?

On the strictly economic side, the issuer of the international currency benefits from seigniorage gains (the ability to print money in exchange for goods). Conventional estimates indicate that 50 to 60% of the total US outstanding dollar notes are held abroad. Foreign holders of cash dollars give the US Treasury an

interest-free loan (they could, after all, use the dollars to buy interest-bearing US Treasury securities). The flow of this international seigniorage to the United States is around 0.1% of GDP per year.

There is another, often neglected source of seigniorage: a liquidity premium on short-term government debt. Non-resident holdings of US government securities are 25% of the total stock, compared with 17% in other major markets. Turnover relative to stock outstanding is also higher for dollar-denominated government securities. Their liquidity makes them attractive to international investors. This extra demand for dollar-denominated securities arising from their international use raises their prices. Thus the international currency effect reduces the real yields that the US government has to pay on its debt. Back-of-the-envelope estimates indicate that this liquidity premium could be at least 25 basis points, so this second source of seigniorage could be of the same order of magnitude as international currency seigniorage.

On top of all that, there are efficiency gains, which arise from the deepening of foreign exchange and financial markets when a currency is widely used. These gains, we estimate, are of the same order of magnitude as the total seigniorage gains. Added together, these numbers are not huge, but far from negligible: the total yield to the US from the dollar's international predominance could be as much as 0.4% of GDP, as a perpetual flow. It is therefore of significance both to Europe and to the US whether Europe can lay claim to some part of these

benefits. Although the division is not entirely zero-sum, there is nevertheless potential conflict here and hence a source of instability in the international financial system.

We have developed a new approach to assess whether the euro will take on an international currency role, and to what extent. In a world where more than 1,500 billion dollars worth of currency are exchanged every day on foreign exchange markets, we put financial market considerations at centre stage in our analysis. This differs sharply from all previous studies and the still-conventional perspective, in which international trade flows and official reserve holdings are the main determinants of international currency status.[3]

[3] It is gratifying that the European Central Bank appears to have adopted an analytical framework that privileges private-sector financial market development among the determinants of the euro's international role (ECB *Monthly Bulletin*, August 1999).

A currency is a good means of payment if many people use it. The usefulness of a given currency for financial transactions and for the denomination of financial assets increases with the number of people using it: there is a “network externality” in currency use. When markets are very liquid, because there are many buyers and sellers, transaction costs are low – partly because it is easier to find someone to accept your desired trade. My entering the market increases its liquidity for you, and conversely. This in turn encourages even more people to use these markets. Because of these reciprocal spillovers, integrating euro financial markets gives a potentially much bigger market than the sum of all pre-existing European financial markets.

A vehicle currency is a currency used for intermediate transactions on the foreign exchange market. Suppose an Indonesian firm is importing from Spain. The financial transaction will follow the sequence of exchanges rupiah/dollar, dollar/peseta, in which the dollar is the vehicle currency. There is no market to exchange directly rupiahs against pesetas, because there are so few such transactions that they would be prohibitively expensive to organise.

The dollar is now the major vehicle currency in foreign exchange markets, just as US Treasury securities are the financial asset of choice for those who are holding funds in between transactions. But as euro securities markets become deeper and more liquid and transaction costs fall, euro assets become more attractive, and the use of the euro as a vehicle currency expands. There is a synergy

between the use of a currency as a vehicle and as a currency of denomination for financial assets. Private invoicing behaviour, official reserve holding behaviour, and the use of a currency as an anchor (pegging) are all secondary to these financial and forex market interactions.

For example, because the dollar is the major vehicle currency, central banks usually use dollars when they intervene in foreign exchange markets. If the Bank of England wants to move sterling up, it will normally buy sterling for dollars rather than DM or yen, much less French francs or rupiahs. That in turn means the Bank of England wants dollars as the major share of reserves, except insofar as the Bank wishes to diversify against the risk of dollar depreciation.

Currently, the dollar is dominant in the forex markets. BIS data show that in April 1998, the dollar was used in 87% of transactions in foreign exchange markets while the DM was used in only 30%. Other EMS currencies (as they then were), excluding sterling, were used in 22% of transactions, and sterling in 11%. The yen was used in 21% of transactions.[4] In 1995, 48% of world exports were invoiced in dollars, 15% in DM, 18% in other major European currencies and still only 5% in yen. The share of the dollar in official reserves, although declining, is overwhelmingly higher than the share of any other currency. From 76.1% of total official currency reserves in 1973, the dollar fell to 63.3% in 1994; the share of the DM rose from 7.1% to 15.5 %, while that of the yen rose from almost 0 to 8.5% in 1994.

What will happen now that the euro is available? In our research (Portes and Rey, 1998) we have used a three-region world model (Europe, United States, Asia) to determine jointly the choice of a vehicle currency and the demand for financial assets denominated in different currencies in the medium run. We find that there are several possible scenarios.

The most likely are those we call the ‘quasi status quo’, ‘medium euro’, and ‘big euro’. In the first, the euro would replace the dollar as the dominant currency for exchanges between Europe and the Asian bloc, but the dollar would remain the vehicle currency on the forex markets. In the ‘medium euro’ scenario, the euro replaces the dollar as the main international currency for financial asset

[4] Note that each transaction has two sides, so all shares would sum to 200%.

transactions, but transactions between the United States and the Asian bloc are still dominated by the dollar, and the dollar is still the vehicle currency on the forex markets. In the 'big euro' scenario, the euro also takes on the vehicle currency role.

Forex and securities market data show that initially, the quasi status quo is the most likely. But if financial market integration in Europe progresses sufficiently, and the euro area is sufficiently large (UK entry is important here), then the overall size of European securities markets could bring transaction costs down far enough that the fundamentals would support either the medium euro or the big euro scenario. Thus we find that the euro may take on some of the current roles of the dollar. The extent to which it does will depend on policy decisions and on the beliefs of market participants.

How fast will this happen? Certainly not immediately – indeed, Y2K problems are probably inhibiting the shift to euro invoicing. This obstacle will of course pass. Still, it took over three decades and two World Wars for the dollar to replace sterling as the main international currency. But during that period, capital mobility was nowhere near its present volume and speed. With increasing interconnection and integration of financial markets, even major systemic changes could occur much more quickly now. Nevertheless, we are doubtless looking at a five to ten year horizon, if not longer. But some aspects of the changing balance may show up much sooner.

The significance of the international role of the euro goes much further. Because of the interaction between the foreign exchange markets and the securities markets, an international euro goes together with an integrated, international market place for government and corporate securities. We discuss the development of these markets and the implications in Sections 3 and 4.

3. Fixed income markets

The market integration that is both a cause and an effect in this internationalisation process is already under way. In the short-term money markets – in particular, Euro-commercial paper – the proportion issued denominated in euros is rising rapidly. Market integration has been very fast in the money markets and at the short end of the yield curve.

Responding to competitive pressures, euro area governments have all redenominated their outstanding debt stocks in euros from the beginning of January (of course, all new issues are in euros). These are a high proportion of commercial bank assets – so the banks will be seeking to expand the euro-denominated component of their liabilities. A common interest rate benchmark has quickly been established at the long end of the market: the German 10-year bond. This is related to the dominance of the 10-year German bond in the futures market, where it has become the highest volume contract worldwide. There is as yet no comparable benchmark security at shorter maturities.

Governments want to sell to institutions, and they can no longer rely on a captive domestic investor base. They must therefore attract international investors by eliminating the regulatory, fiscal and other sources of market segmentation. Within a year or two we shall see a government bond market operating comparably to that of the United States – and the euro area government bond market is now 29% bigger (bonds of remaining maturity exceeding one year) (Bishop, 1999c). The euro government bond market will rapidly become substantially larger than that of the US: an increasing proportion of euro area government debt will be securitised (Bishop, 1998), while the US government has a budget surplus and the euro area a deficit.

Before EMU, inventories of national (domestic) government bonds served as collateral for national central bank lending. Now, however, the European System of Central Banks accepts a wide range of collateral, and there is no artificial advantage for domestic institutions to make markets in domestic bonds. This will push financial institutions to operate across the euro area, in a full range of euro securities. Interbank operations will be in euros – at any given time, they amount to about one-third of the total balance sheet of the banking system. Pension funds and life insurance companies are no longer constrained by currency matching rules within the euro area. The development of institutions like Euroclear and Cedel simplifies the trading infrastructure and permits real-time settlement; this infrastructure will facilitate internet trading and will also work

towards market unification. A purely electronic trading platform for benchmark government bonds, EuroMTS, now has a market share of perhaps 40% (Bishop 1999c), and thereby enhances liquidity.[5]

The effects are already evident in the government bond markets. Bid-ask spreads have come down and are now comparable to those on dollar bonds. There are many bigger, more liquid benchmark issues: this is partly because governments are shifting to fewer, larger issues, because their greater liquidity enhances their competitive position in the euro government bond markets. The number of these issues is becoming comparable to those in the US Treasuries market. The volume of transactions is up substantially as well. Cross-country spreads are narrow, indicating much less difference in perceived credit risk than had been expected. The markets clearly are in the process of unifying. As a result, 'the dollar's supremacy has been challenged in the global debt markets (*Financial Times*, 14 June 1999).'

Securitisation is taking off in the euro area, together with the venture capital sector and 'junk bond' issuance. All this comes with the creation of a single capital market whose breadth, depth and liquidity will be much greater than that of the individual national markets. In Europe, compared to the United States, banks have dominated corporate financing, with securities issues coming mainly from large, AAA or AA rated companies.

[5] A more sceptical view on the integration of securities markets in the euro area is provided by Corsetti and Pesenti (1999).

This too is already changing. ‘Last year the gravitational point on the credit rating spectrum for European investors was from AA+ to AA-; now it is from AA- down to A+. That’s an amazing turn-round in appetite for credit (Niall Cameron, Merrill Lynch, quoted in *Euromoney*, April 1999, p. 49).’ European corporate issuance nearly quadrupled in the first quarter of 1999 relative to the comparable quarter in 1998; by the third quarter it was up sixfold (Bishop, 1999c). The average rating fell from AA+ to AA- (still not down to the BBB+ of the US, but a significant change, if it is maintained – see Bishop, 1999a). And the large companies are coming to the market with big benchmark issues: 1-3 billion euros each for Alcatel, Repsol, and Mannesmann, and the exceptionally large 8 billion euro issue to finance the Olivetti takeover of Telecom Italia. Market participants agree that such a transaction was simply not feasible before 1999. Nor was there a corporate bond market for issues longer than three to four years – there is now. American corporations are also increasing their issuing in euros, and prospective changes in US accounting standards may give a further inducement for them to fund their EU activities with euro-denominated bonds.

The aggregate statistics and the euro *v.* dollar comparisons are very difficult to interpret, because it is hard to match up comparable categories of securities. A range of data reported by Bishop (1999a, b, c) and the BIS (1999) confirm, however, the effective parity between euro and dollar issuance in the international bond markets, as well as the rise in euro issue size (in both government and corporate securities) and hence liquidity. For example, net

issues of international debt securities in the first half of 1999 totalled $290 b. for dollar-denominated securities and $242 b. for euro-denominated securities; excluding domestic issuers, the euro issues significantly exceeded those in dollars (BIS, 1999).

The effects on emerging markets are not clear. On the one hand, single-A European corporate securities are now competing with emerging market sovereign issues in the portfolios of European investors. On the other hand, at the macro level, the quantum increase in European securities market liquidity is likely to spill over into lower-quality markets around the world.

What is clear, however, is that ‘the [corporate] bond markets are already operating in a dual currency world (*Financial Times*, 12 April 1999).’ This offers opportunities for borrowers around the globe: ‘Borrowers can now play one market off against the other (*Financial Times*, 18 February 1999).’

4. Equity markets

A range of evidence suggests a fairly rapid process of convergence and integration in European equity markets. That will lead to greater participation in these markets by portfolio managers from outside Europe, in particular, from the United States and Asia.

Research currently under way indicates that the cross-country correlations of equity market returns have risen as economic and monetary integration in Europe has proceeded. This appears to hold at the sectoral level as well as for country aggregates. The work of Rouwenhorst (1998) indicates that there is still some way to go in eroding country effects, but the trend is clear.

Securities market institutions are collaborating in ways that will ultimately lead to mergers. The United States now supports only two significant stock markets. It is unlikely that Europe will maintain so many separate institutions for long after the disappearance of restrictions due to separate currencies. Despite difficulties, the Frankfurt-London stock exchange accord is now being implemented, and several other partners have joined those exchanges. Similar moves towards cooperation in derivatives markets are underway. Where there is no cooperation leading to more formal joint activity, there is likely to be competition leading to the disappearance of smaller local markets.[6]

[6] See Gehrig (1999) for an analysis of the relation between local information and the geography of securities trading, with applications to Europe. As informational differences vanish (see

Mergers and acquisitions in Europe have been expanding strongly for several years. They trend upwards from 1994 onwards, with a substantial increase in 1998. In the first nine months of 1999, European M&A activity exceeded that in the US (*Financial Times*, 25 October 1999). Size matters: larger European firms will be more attractive to non-European investors. And the M&A is a major source of new corporate bond issuance.

Will investors from outside Europe participate more extensively in the newly integrated European capital markets? For equities, our recent research has shown remarkably strong effects on gross bilateral cross-border equity transaction flows for geographical distance and variables explicitly measuring information flows (Portes and Rey, 1999). We conjecture that distance too is proxying information flows.

These results may have implications for 'home bias' (referring to the evidence that residents of a given country invest much less abroad than portfolio allocation models would appear to suggest as optimal diversification; Lewis, 1999). Tesar and Werner (1995) conclude that geographical proximity, trade linkages and language seemed to matter more for securities transaction flows than portfolio diversification motives. Our empirical work highlights the role of informational asymmetries.

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discussion in text below), he argues, competitive pressures will grow, and some national exchanges may find it difficult to survive.

If informational asymmetries are indeed so important, then we may expect EMU to provide a significant stimulus to integration of the market for European equities. Hardouvelis *et al.* (1999) find empirical support for this integration; they show a growing role for EU-wide market risk relative to local risk. The analysts who do equity research are increasingly focusing on cross-Europe sectoral comparisons, moving away from their previous country-centred orientation. Moreover, currency differences have been a likely source of informational problems for investors from outside the euro area.[7] The elimination of these internal informational asymmetries should raise the liquidity of European markets and increase the attractiveness of transacting in European equities for non-European portfolio managers. Hardouvelis *et al.* argue that this process will have the effect of reducing the cost of capital in Europe quite substantially. This will interact with other aspects of financial integration. Martin and Rey (1999a, 1999b) show that financial integration that lowers transactions costs will raise the demand for assets and asset prices, thereby lowering the cost of capital.

[7] But there is still 'home bias' in securities markets *within the United States* (Huberman 1999).

Venture capital in Europe has been inhibited because investors cannot easily realise gains from successful ventures. EASDAQ and the Neue Markt are very small relative to NASDAQ. In a much larger, more liquid market, the possibilities for initial public offerings (IPOs) for smaller firms will be much greater, just as junk bond issues will become much more frequent. Past constraints of market size will be transformed by the common currency and a common monetary policy. And there will be institutional change: NASDAQ itself has just announced its intention to launch a European exchange (see the analysis in *Financial Times*, 8 November 1999). In this as in other respects, the borders are finally coming down, and the European Commission's new 'action plan' for creating a single market in financial services should accelerate the process.

5. Portfolio shifts

If the euro takes on its international role fairly quickly, the transition may be rather tricky. The initial euro share of international assets is far below the size of euroland in world GDP and trade. Admittedly crude estimates by various observers suggest there would be a likely medium-term portfolio shift of 475-950 billion dollars into euro-denominated assets (see Henning, 1997, for a summary).

As argued in Secs. 3 and 4, the gradual erosion of the 'home bias' of American institutional investors will be accelerated by the single European currency and the unification of European capital markets. Japanese institutions currently hold

only 20% of their international portfolios in European-currency-denominated securities – the markets expect that proportion to double, in due course. Overall, the major shifts will be from the private sector. But as discussed in Sec. 2, central banks will follow with significant shifts into euro-denominated reserves (again, there is a wide range of estimates – see Henning, 1997). Masson and Turtelboom (1997) argue that there is considerable scope for reserve portfolio diversification toward the euro. All this is likely to happen when conjunctural changes set in (upswing in Europe, slowdown in the US, possibly associated with a sharp US equity price 'correction' and then falling dollar interest rates).

The supply of euro assets is already responding to this demand shift, as noted in Secs. 3 and 4 above. Nevertheless, new issues are a small fraction of stocks. If at some point the shifts in portfolio demand become abrupt, the supply flows may not match them. If that is so, there will be pressure for the euro to appreciate, even perhaps to 'overshoot'.

6. Foreign exchange markets and exchange-rate stability

The structure of the foreign exchange markets is changing in response to the shift to the euro. Volumes continued to grow rapidly through 1998, but there was some slowdown in early 1999 as a consequence of eliminating the separate national currencies from the market. The usage of new instruments is expanding,

however, and BIS data indicate that in many categories of derivatives, volumes in euros exceed those in dollars. The Reuters quote frequency data for the first nine months of 1999 suggest a very substantial expansion of the vehicle currency role of the euro vis-à-vis that of its predecessor currencies and of the dollar.[8] All this is consistent with the process of growing internationalisation of the euro. What are the likely concomitants in exchange-rate behaviour?

We consider first the volatility of the euro exchange rate and then its level. As we saw in Sec. 5, there is likely to be substantial private sector and central bank portfolio rebalancing from dollar- to euro-denominated assets over the next few years. When the portfolio stock adjustments have taken place, however, the issues are rather different. Will the internal exchange rate volatility eliminated by EMU be transferred to the euro exchange rate? Or will the creation of a large euro zone make both monetary policies and the exchange rate itself more stable? The repercussions of the euro-dollar and euro-yen rates for emerging markets and less developed countries make this a key issue for the entire global economy.

One way to analyse the euro's likely volatility is to start from a known fact: the 'size effect' of EMU. The size of the zone created by EMU will be bigger (far bigger in the case of the full EU-15) than any individual member. This means that from a macroeconomic and trade perspective, the EMU zone will be less open, as measured by the share of exports in GDP. If EMU included all EU member

[8] Private communication from Michael Moore.

states from the start, the zone's degree of openness would be similar to that of the US and Japan: 12% for the EU-15, compared to 10.5% for the US and 9.5% for Japan.

This size effect will certainly lead the European Central Bank (ECB) to attach less importance to the euro's exchange rate against the dollar than did any of the 'constituent' central banks – in particular, the Bundesbank. Exchange rate changes have a smaller impact on the domestic price level in a larger country, and the Bank may also care less about the trade and output consequences of changes in the exchange rate. On the other hand, foreign exchange market intervention will have a proportionally smaller effect on euro-area money supply than did intervention in the deutschemark markets on the German money supply; this may somewhat counteract the ECB's disinclination to intervene.

Cohen (1997) starts from reduced openness to argue that the euro will be more volatile than existing European currencies. For example, compare the reactions of the Fed and the central banks of Europe to the recession of the early 1990s. Whereas in the US the Fed did not hesitate to lower interest rates aggressively, the European central banks reacted much less strongly, in part because of their fear of the consequences both for bilateral exchange rates and for the exchange rate with the dollar.

Cohen argues that since such concerns will be eliminated or at least reduced

with EMU, monetary policy and fiscal policy may be more reactive to domestic shocks and therefore more unstable. With perfect capital mobility, this in turn will lead to more unstable exchange rates.

On the other hand, Martin (1997) argues that a large country has less incentive to use its monetary policy strategically to stabilise its economy than a small country. Again, this is because output of the former depends less on the exchange rate than output of the latter. Reduced use of the exchange rate as a strategic instrument should lead to a more stable exchange rate. From that point of view, the euro should be a more stable currency.

Theory thus suggests alternative scenarios of both higher and lower euro volatility. An examination of existing relationships between country size and exchange rate variability for OECD countries helps clarify the likely outcome.

Martin (1997) finds a strong positive relationship between size and volatility for relatively small countries. But the relationship is non-linear and appears to be reversed for large countries. In other words, the larger a *large* country, the less volatile its currency. Since EMU will entail the creation of a very large monetary zone, his empirical model actually predicts a small *decrease* in *nominal* exchange rate variability. This decrease should be more significant the larger the monetary union.

Cohen (1997) approaches the problem differently, focusing on real exchange rates and *simulating* the reaction of the ECB to different shocks. Under a scenario where monetary policy is more aggressive because the Bank is less concerned about trade imbalances, he finds an increase in the volatility of the real exchange rate.

Breedon and Chui (1998) do not impose any specification. Instead, they simply regress volatility of the real effective exchange rate (standard deviation of monthly percentage change) on the ratio of imports to GDP and the level of GDP for a sample of 92 countries, including a term in the square of GDP to allow for the non-linear relationship predicted by Martin. They find coefficients on all three regressors significant and of the predicted sign: volatility falls with openness and the square of GDP and rises with the level of GDP. But the estimated coefficients are such that evaluating volatility using the point estimates gives an 'openness effect' twice the 'size effect' for the comparison of EMU relative to Germany. Thus the fact that EMU will be a less open economy than Germany dominates the fact that it will be bigger, indicating that volatility of the euro *real effective* exchange rate will be *higher* than that of the DM.

As the euro emerges as a major international currency, changes in interest rate differentials between the dollar and the euro are likely to have much bigger effects on the exchange rate. This is so because investors will be able to

arbitrage much more freely between euro and dollar assets if both markets are deep and broad. This tendency could be limited, however, if the euro-yen and the dollar-yen exchange rates were significantly negatively correlated. In that case the euro and the dollar would not be substitutes but rather complementary, since they would enable risk diversification.

Now we turn to the level of the euro exchange rate. Some have argued that a ‘wide euro’ – one that extends beyond the ‘core’ countries closely associated with the German economy and past Bundesbank monetary policies - will be a weak euro, in terms of both inflation performance and the exchange rate. A euro that is weak on either criterion would not be attractive to international asset-holders and would be unlikely to become a major reserve currency.

The Maastricht Treaty’s restrictions on government debt and deficits were indeed interpreted with some flexibility, as the Treaty provided. The eleven countries that inaugurated the euro include Italy, Spain and Portugal. The criticism was that this ‘Club Med’ would be inflation-prone – these countries have no durable fiscal discipline and lack a ‘stability culture’, so their central bank governors might introduce a ‘laxist’ nucleus into the Council of the European Central Bank. This was of course nonsense from the outset, as the ECB’s monetary policies so far have made amply clear. The southern tier’s inflation hawks have had remarkable achievements in qualifying for EMU. They were unlikely to become more irresponsible from going to Frankfurt fortnightly. Moreover, our analysis above

suggests that the wider the euro area and its capital markets, the more attractive it will be to investors.

Other sceptics about the international role of the euro say that it cannot be a strong currency because of underlying weaknesses in the European economy, with weak productivity performance as well as unsustainable levels of public expenditure. This view says economic performance underlies reserve currency status. But that ignores history – European economic performance, in both growth and productivity, excelled that of the US for decades after the war, without in the slightest disturbing the dollar's pre-eminence. And the strength of the yen against the dollar in the 1990s seems inversely related to the relative performance of the two economies. A really dysfunctional, faltering European economy (like that of Japan…) would certainly hinder the internationalisation of the euro. Conversely, however, that internationalisation will – especially through its effects on the capital markets – promote European growth.

The euro has of course depreciated vis-à-vis the dollar since the first few days of January. But the interpretation by market commentators that this shows the 'failure' of the new currency cannot be taken seriously. The *macho* view of the exchange rate may have some political uses, and it may reflect the frustration of some market participants at having taken losses because of a simple-minded market consensus at the beginning of January that the euro would appreciate. But economically, the weakness of its currency has been a gift to the euro area in

its weak conjunctural position. And the main ‘fundamental’ underlying the depreciation is precisely that short-run cyclical weakness in juxtaposition with the unexpected strength of the continued American expansion.

Other significant forces are at work too: the unexpectedly large volume of new corporate issues in euros, some of whose proceeds have immediately been converted into dollars; the inexperience of ECB senior management in dealing with the foreign exchange markets and their difficulties in speaking with one voice, which has certainly impaired their credibility in the short run; Mr Lafontaine’s highly confrontational approach to the ECB; the exception made for the Italian budget deficit, which was blown entirely out of proportion and may in the event prove unnecessary.

In any case, the data themselves are misinterpreted: as of summer 1999, the real effective exchange rate of the euro is not significantly below its average for the entire period since January 1997, and it is less than 10% down from its peak during that period. So the forex market and press commentary should be taken no more seriously than either the early 1998 exaggerated view that the euro would be weak or the late summer 1998 exaggerated view that the euro would appreciate indefinitely.

The fundamentals give a fairly clear medium-run picture: the United States is running a current account deficit of close to 4% of GDP and the euro area is

running a surplus around 1%; PPP also suggests some need for euro appreciation (see the BIS *Annual Report 1998-99*); and the portfolio shifts discussed above are likely to bring it about, as soon as US equity prices do fall significantly. In the light of our discussion of volatility above, the danger then will be an overshooting appreciation.

7. The role of policy

Some aspects of ECB monetary policies will be particularly relevant to securitisation and capital market integration. For example, market participants' confidence in the willingness of the authorities to engage in short-run interest rate smoothing is helpful in the development of securities-dominated capital markets. A clear locus of (domestic) lender-of-last-resort authority and confidence in that authority (and the information available to it) are also essential.

The international financial scene is still fragile. European lenders are heavily exposed to crisis countries and others that might succumb to contagion. The monetary authorities might have to intervene to guarantee financial stability. But there is excessive decentralisation in financial supervision and regulation in the euro zone - the national central banks typically come between the ECB and the national supervisory agencies. There is total silence in the Maastricht Treaty, and very little said by the ECB, on the Bank's role in supervision and regulation and its responsibilities as lender of last resort (but see Padoa-Schioppa, 1999).

These issues need urgent attention (*Monitoring the European Central Bank, 1* and *2*). More centralised supervision and regulation would also help in the implementation of monetary policy: by removing barriers to cross-border banking mergers, it would help to break down the segmentation that results in heterogeneous monetary policy transmission mechanisms across euro area countries. That would in turn also promote monetary stability in the euro area.

Any measure enhancing the credibility of the ECB will also be important. Credibility does not simply derive from being seen to conduct a 'tough' monetary policy, as demonstrated by the recent successes of the United States Federal Reserve in managing aggregate demand. The emergence of a true corporate culture within the Board of the ECB, ruling out any suspicion of national coalitions, will be important.

The European authorities will have to take account of monetary instabilities, portfolio shifts, and exchange-rate pressures in setting their monetary policies. This may make simple policy rules (like targeting monetary aggregates) inadvisable, indeed unworkable, at least in the early years. There are especially strong arguments for inflation targeting in these circumstances (Buiter, 1999), but the ECB is resisting it (Issing, 1999). Moreover, improvements in international macroeconomic policy co-ordination may be necessary to mitigate the effects of potentially sizeable portfolio shifts. That will in turn require improving the decision-making process within the euro area. In particular, the respective

competences (and the interfaces) of the Euro-11, Ecofin and the ECB should be clarified.

The United States will discover that with a seriously competitive European capital market, the US is not insulated from the effects of exchange-rate instability on domestic financial stability. That is, international investors will have a serious alternative placement – and withdrawal of funds in response to fears of dollar depreciation could both validate those fears and endanger domestic financial institutions. More generally, the existence of two major capital markets offering international investors comparable liquidity, depth and breadth will give portfolio managers a real choice. That would seem likely to make international portfolio allocation more responsive to shocks, in the short run. In well-known ways, such behaviour could amplify the shocks. There is room for concern about the consequences for systemic stability.

This and the macroeconomic policy issues need not favour a push for exchange-rate target zones, which are unlikely to be adopted and unlikely to work if they were (see Coeuré and Pisani-Ferry, 1999; Clarida, 1999). But they could motivate better international macroeconomic policy coordination.

Widespread American academic scepticism about monetary union ('Europe is not an optimal currency area' – as if the United States were an OCA[9]…) has undoubtedly affected the views of Washington policy-makers, but the official American attitude towards EMU is positive: what the Europeans judge is good for their economy will be good for the United States, provided it is implemented properly – in particular, if Europe reforms so as to make its economy more flexible, like that of the US. (And by the way, Europe really should run a more expansionary macroeconomic policy in the present state of the international economy…)

The relevant point for our purposes here is the studied unconcern of the American authorities regarding any challenge to the international dominance of the dollar. Former Treasury Secretary Robert Rubin, Secretary Lawrence Summers, and Undersecretary Tim Geithner have all expressed views similar to those in a speech by Geithner on 7 May 1998: 'If…Europe deliver[s] a successful, credible EMU backed by strong policy fundamentals, a more integrated capital market, and a more dynamic economy, then EMU would probably be associated with some gradual increase in the euro's role in the [international monetary] system…All the bad scenarios for the dollar would probably have to start in the United States.'

[9] These analyses also ignore the reasons for which Robert Mundell, for example, concluded that analysis along the lines of his 1961 OCA paper was inappropriate criticism of EMU (*Wall Street Journal Europe*, 24 March 1998); and why Peter Kenen, another pioneer in that literature, is also inclined to downgrade its relevance to the single currency.

Yet it is difficult to believe that the American authorities are indifferent, for example, to the possible ‘euroisation’ of countries in Central and Eastern Europe and perhaps to the south of the EU (the latest reports of such discussions come from Croatia – see *Wall Street Journal Europe*, 17 June 1999). One indicator is that they have not reacted as negatively to the proposals of dollarisation coming from Argentina and Mexico as they did to those from Israel in the early 1980s. Movements in this direction, on either or both continents, could have far-reaching effects on the international financial system and its stability.

8. Conclusions

This paper brings some analysis and evidence to bear on Europe’s changing role in the global financial system and its consequences for other countries, especially emerging market countries, as well as for international financial stability. Among the conclusions that emerge are the following:

- The financial markets and the beliefs of market participants, as well as policy decisions, will determine the outcome of the dollar-euro ‘competition’.
- With increasing global integration of financial markets, even major systemic changes could occur much more quickly now than in previous eras.
- Competition between currencies and securities markets will have repercussions in the foreign exchange markets.

- We can expect large portfolio shifts as the euro capital markets unify and approach parity with those in the United States; if the shifts become abrupt, there will be pressure for the euro to appreciate, possibly to overshoot.
- Within a year or two, we shall see a euro government bond market comparable in liquidity to that of the United States and substantially larger.
- There is already parity between euro and dollar issuance in the international bond markets and a major rise in euro issue size.
- Emerging markets will benefit from the growing liquidity of euro securities markets but may experience stiffer competition with euro-area issuers.
- But borrowers can now play off the euro market against the dollar market.
- EMU has already accelerated European equity market integration.
- Venture capital as well as junk bonds will be favoured by a much larger, more liquid market.
- The volatility of the euro real effective exchange rate is likely to be higher than that of the DM.
- As the euro emerges as an international currency, changes in interest rate differentials between the dollar and the euro are likely to have bigger effects on the exchange rate between them.
- Forex market and press disparagement of the ‘weak euro’ should be taken no more seriously than either the early 1998 exaggerated view that a wide euro would be a weak euro or the late summer 1998 exaggerated view that the euro would appreciate indefinitely.

- The fundamentals suggest some need for euro appreciation from its current level.
- The existence of two major capital markets is likely to make international portfolio allocation more responsive to shocks, with implications for systemic stability.
- Moves by smaller countries to dollarisation or euroisation could have far-reaching impacts on the international financial system and its stability.

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