
Regional Perspectives

East Asia

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East Asia provides a crucial test of the euro's attractiveness as an international currency outside Europe's own neighborhood. This paper compares the roles of the euro and dollar in the region and their prospects. Although I consider myself an early and consistent supporter of the Economic and Monetary Union (EMU), I do not predict a rapid increase in the role of the euro in East Asia. The international role of its currency is not the most important test of the success or failure of a monetary union. Such a role for the euro would not necessarily benefit Europe, moreover, because it carries costs as well as benefits. However, examining the international role of the euro is important to understanding the operation and stability of the international monetary system. The following sections address the overall prospects for the euro, approaches to understanding currency use in East Asia, the recent empirical record, and the relevance of Asian regionalism. These treatments are followed by a brief conclusion.

Overall Prospects for the International Role of the Euro

The advent of the EMU created an alternative to the dollar that is potentially more attractive than any of the European "legacy" currencies or the Japanese yen. When asked about this in the 1990s, Lawrence Summers,

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then at the US Treasury Department, was fond of saying, “The fate of the dollar is still largely in our own hands” (US Senate 1997). This statement was reassuring, but in a diplomatically evasive way. In previous decades, the United States could make macroeconomic mistakes—which it did on monetary policy in the 1970s and fiscal policy in the 1980s—with relative impunity. Because the currency alternatives were limited to the Deutsche mark, Japanese yen, and Swiss franc—currencies backed by economies and capital markets that were nowhere near the size, diversity, and liquidity of those of the United States—such mistakes produced diversification out of the dollar only at the margin. I argued that the United States would pay a greater cost in terms of diversification out of dollar assets if it made such mistakes after the creation of the euro (Henning 1997, 2000). At least until relatively recently, though, the United States has avoided high inflation or large fiscal deficits since the advent of the euro.

The euro’s encroachment on the international role of the dollar has so far been on the margin, rather than game-changing. This is true across most measures—foreign exchange reserves, trade invoicing, vehicle function in foreign exchange markets, and international financial assets. In its most successful arena, as the currency of denomination of international bond issues, the euro plays a role that approaches but remains slightly less than that of the dollar. Rather than a continuous trend increase in the euro’s share by this measure, however, we have seen a leveling off in recent years (ECB 2008, box 1, 15–16). Extrapolating from prior experience, therefore, prospects for the euro seemed more hopeful at its fifth anniversary (Posen 2005) than at its tenth. The euro has become widely used in its own regional neighborhood but not a global currency seriously challenging the dollar in other regions—a conclusion well documented by the European Central Bank’s annual report on the subject (ECB 2008; see also Cohen [forthcoming] and Cohen and Subacchi 2008).

Asian countries hold most of the world’s foreign exchange reserves and are therefore especially relevant to the euro’s global future (table 3.1). Seven Asian countries, including India, rank among the top 10 holders of official foreign exchange reserves and 9 Asian countries rank among the top 15. The reserves of ASEAN+3+2 (that is, the member countries of the Association of Southeast Asian Nations plus China, Japan, and Korea, and then adding Hong Kong and Taiwan) amount to almost \$4 trillion, more than 54 percent of world foreign exchange reserves (as of April 2008). Moreover, East Asia represents almost 20 percent of world product, at current exchange rates—25 percent when calculated at purchasing power parity—and 27 percent of world exports. Philip Lane and Gian Maria Milesi-Ferretti (2007) calculate that the region holds more than 12 percent of international financial assets. Moreover, these percentages are growing. For the euro to break out of the European neighborhood into a global role, it would have to capture “currency market share” in East Asia.

Table 3.1 World's major foreign exchange reserve holders

Rank	Country	Amount (billions of US dollars)			Percent share of world total, April 2008
		2001	2005	April 2008	
1	China	212	819	1,757	24.02
2	Japan	388	829	978	13.37
3	Russia	33	176	519	7.09
4	India	45	131	304	4.16
5	Taiwan	122	253	289	3.96
6	Korea	102	210	260	3.55
7	Brazil	36	53	195	2.66
8	Singapore	75	116	175	2.40
9	Hong Kong	111	124	160	2.18
10	Algeria	18	56	126	1.72
11	Malaysia	29	69	123	1.69
12	Thailand	32	51	107	1.47
13	Mexico	44	73	92	1.26
14	Libya	14	38	87	1.20
15	Poland	25	40	76	1.04

Note: Asian countries are highlighted in bold.

Sources: International Monetary Fund, *International Financial Statistics*, September 2008; Central Bank of Taiwan.

Alternative Approaches to Currency Use in Asia

Two alternative views provide a useful context in which to situate analysis of international currency usage in East Asia. Let us call them the “dollar standard” school and the “dollar pessimist” school.

Ronald McKinnon (2006) has written most lucidly on the East Asian dollar standard and his book on the subject is a key point of reference. The concept of “conflicted virtue” plays a central role in his analysis. Asian countries with high domestic saving rates, capital outflow, and current account surpluses accumulate foreign assets but are not able to lend in their own currencies; they choose to accumulate dollar assets. Growing current account surpluses place them in a dilemma: They must appreciate their currencies to avoid foreign protectionism but suffer losses on their dollar portfolios if they do so. Conflicted virtue for creditor countries involves the same currency mismatch, but with opposite effects, as “original sin” for debtor countries. Given his assumptions and orientation, McKinnon concludes that East Asian reliance on the dollar is both desirable and likely

to continue.¹ The so-called revived Bretton Woods interpretation offered by Michael Dooley, David Folkerts-Landau, and Peter Garber (2003) is closely related to the dollar standard view. Although they are less concerned about the role of the dollar as a nominal anchor for Asian countries, the revived Bretton Woods advocates also defend heavy Asian foreign exchange intervention, currency undervaluation, and accumulation of large piles of dollar reserves.

Counterpoised to the dollar standard view are many who believe this pattern of intervention and reserve accumulation to be unsustainable. Barry Eichengreen expects that, when faced with continued US current account deficits, trend depreciation of the dollar, and an intractable collective action dilemma among reserve holders, Asian central banks will at some point sell dollars for other currencies (Eichengreen 2006). That point could be the euro's historic moment of opportunity to broaden its international role to East Asia.

Though their argument is not specific to East Asia, Menzie Chinn and Jeffrey Frankel (2008) are particularly bullish on the euro in the long term. The concept of a "tipping point" in currency usage is one of the contributions of their recent article. They argue that the underlying determinants can change incrementally over a considerable period without causing equivalent changes in reserve currency shares. But once these changes cumulate to a certain threshold, the reserve portfolio can be redistributed relatively rapidly. Chinn and Frankel believe that such a threshold could be reached as early as 2015. While the concept is intriguing, the existence and location of the tipping point are, of course, hypotheses.

Present Role of the Dollar and Euro in East Asia

As of the tenth anniversary of the creation of the euro, the dollar continues to play the dominant role in East Asia. To get a sense of the relative standing of the two currencies—and the distance that the euro must cover to play a role equal to that of the dollar in the region—consider their shares in foreign exchange reserves, exchange rate regimes, foreign currency markets, bond markets, and trade invoicing, in that order.

Foreign Exchange Reserves

With respect to shares in world foreign exchange reserves, the dollar's share is about 62.5 percent in value terms and 68 percent in quantity terms.² Most East Asian countries do not publicly disclose the currency composi-

1. McKinnon discusses alternatives to the dollar in his 2006 book, but the euro is not one of them.

2. I thank Edwin M. Truman and Daniel Xie for providing this calculation.

Table 3.2 Estimated composition of Asian reserves, selected countries (percent)

Country	Estimate			Source	Date
	Dollar	Euro	Yen		
Australia ^a	46	37	8	Reserve Bank of Australia ^c	July 2008
China	65 to 70	—	—	Brad Setser ^d	April 2008
Hong Kong	73 ^b	—	—	Hong Kong Monetary Authority ^e	June 2007
Japan	83 to 89	—	—	Truman and Wong (2006)	End of 2004
Korea	65	—	—	Bank of Korea ^f	March 2008
New Zealand	85	12	2	Reserve Bank of New Zealand ^g	June 2007
Philippines	83	10	4	Truman and Wong (2006)	End of 2004

- a. The Reserve Bank of Australia's "benchmark composition" is 45, 45, and 10 percent for dollar, euro, and yen, respectively.
- b. Reported as "dollar bloc" currencies, possibly including Canadian, Australian, and New Zealand dollars.
- c. IMF Monthly Data—Reserve Bank of Australia, International Reserves and Foreign Currency Liquidity, October 2008, available at www.rba.gov.au.
- d. Brad Setser, "Estimating the Currency Composition of China's Reserves," RGE Monitor, May 2008.
- e. Hong Kong Monetary Authority, *Annual Report 2007*.
- f. *Korea Times*, "Assets in Dollars Take 65% of Reserves," March 23, 2008, available at www.koreatimes.co.kr.
- g. Reserve Bank of New Zealand, *Annual Report 2006–2007*.

Note: In the cases of China, Hong Kong, Japan, and Korea, estimates of the breakdown of the non-dollar share into euro and yen shares are not provided.

tion of reserves, so we have to be content with the estimates of various authors who have closely examined reserve management policies. Table 3.2 compiles these estimates for seven countries in the region. Although the country coverage is incomplete, the largest reserve holders are represented. Some of these guesses are fairly well educated, and the numbers for Australia and New Zealand are known rather than estimated. Because the holdings of China, Japan, and Korea are large relative to their partners in Southeast Asia, the dollar share of the reserves for ASEAN+3 as a whole can be estimated at about 74 percent, with reasonable confidence that the dollar's true share lies within 5 percent of this figure.

It thus appears that the role of the dollar is greater in East Asian holdings than in world reserve holdings. Given that the Japanese yen would be expected to play its small remaining role (3.4 percent of world reserves) in its own regional neighborhood, the share of the euro must be correspondingly smaller in this region than worldwide.

Two observations about this measure are noteworthy. First, Edwin M. Truman and Anna Wong (2006) find that reserve diversification has gen-

erally been “passive” rather than “active”—that is, effected through the depreciation of the dollar relative to the euro and other reserve currencies rather than through conversions. To the extent that central banks actively change reserve levels, Truman and Wong find such changes to be generally stabilizing rather than destabilizing of exchange rates but also that Japan’s “Great Intervention” of 2003–04 largely accounts for this finding. Over the next couple of years, it will be interesting to see whether these findings are symmetrical to movements of the dollar—that is, whether or not Asian central banks use episodes of dollar appreciation as an opportunity to *actively* diversify into the euro without accentuating downward movement of the US currency.

The second observation is a caveat: The shift of reserves into sovereign wealth funds (SWFs) could mask currency diversification. Monetary authorities that wish to diversify might well initiate that shift through the most *opaque* vehicle, especially if they are concerned that their move could prompt other dollar holders to sell their reserves—the collective action dilemma about which Eichengreen warns. The currency composition of foreign exchange reserves is disclosed on a global basis by the International Monetary Fund (IMF), whereas the composition of SWF portfolios is not—which might persuade dollar holders to use the latter as the vehicle.

Exchange Rate Regimes

The dollar also dominates as the reference currency for hard pegging, soft pegging, and managed floating in the region. Table 3.3 lists the exchange rate regimes in East Asia as classified both by the IMF and by Carmen Reinhart, Ethan Ilzetzki, and Kenneth Rogoff (2008), the latter presenting a more fine-grained classification scheme. Reinhart, Ilzetzki, and Rogoff incorporate observations through 2007, thus encompassing the shift within the region toward greater exchange rate flexibility prior to the 2007–09 financial turmoil. The table shows the degree to which rates were still pegged and managed in the region.

But the composition of the baskets against which currencies are managed is generally opaque, which has spawned a cottage industry among international monetary economists devoted to estimating them. Jeffrey Frankel and Shang-Jin Wei (1994, 2007) and Ronald McKinnon and Günther Schnabl (2006), among others, have estimated the implicit weight of the dollar to be very high, above 90 percent in the case of China after its switch to gradual appreciation in July 2005. The Malaysian ringgit shadows the renminbi very closely, gradually moving in tandem with it upward against the dollar. Hong Kong has a currency board based on the dollar. The Korean won, Singapore dollar, and Thai baht appear to give somewhat less weight to the dollar and modest weight to the yen. Masa-

Table 3.3 Asian exchange rate regimes

Country	International Monetary Fund	Reinhart, Ilzetzki, and Rogoff
Brunei	De facto peg	Crawling band, narrow ^b
Cambodia	Managed floating ^a	Crawling peg
China	De facto peg	De facto peg
Hong Kong	Currency board	Currency board
Indonesia	Managed floating	Managed floating
Japan	Float	Free float
Korea	Float	Managed floating
Laos	Managed floating	—
Malaysia	Managed floating	Crawling band, narrow
Myanmar	Managed floating	Dual market
Philippines	Float	Crawling band, narrow
Singapore	Managed floating	Moving band ^c
Thailand	Managed floating	Moving band
Vietnam	Managed floating	Crawling peg
Australia	Float	Free float
India	Managed floating	Crawling band, narrow
New Zealand	Float	Managed floating

a. The full IMF designation is “managed floating with no predetermined path.”

b. The full Reinhart-Ilzetzki-Rogoff designation is “de facto crawling band that is narrower than or equal to ± 2 percent.”

c. The full Reinhart-Ilzetzki-Rogoff designation is “moving band that is narrower than or equal to ± 2 percent,” allowing for appreciation or depreciation over time.

Sources: Reinhart, Ilzetzki, and Rogoff (2008); Reinhart and Rogoff (2004); International Monetary Fund, *De Facto Classification of Exchange Rate Regimes and Monetary Policy Framework*, available at www.imf.org.

hiro Kawai (2007) observes a growing diversity of exchange rate regimes and argues that McKinnon overstates the dominance of the dollar, but nonetheless confirms that substantial weight is placed on the US currency. The weight given to the euro in these implicit baskets is generally low, and the European Central Bank lists no East Asian country among those using the euro in baskets for pegs and managed floats.³

Several analysts have proposed that East Asian governments peg jointly to a common basket, usually composed of the dollar, euro, and yen (see especially Williamson 1999 and 2005, Ogawa and Ito 2002; also de Brouwer 2002, Rajan 2002, Kawai 2004 and 2007). But monetary authorities in the region have declined this advice and shifted toward greater currency flexibility in the last three years without adopting a common basket—or without much coordination of exchange rates in other respects either. Asian authorities undertook this shift as the dollar depreciated against the euro. But it is not at all clear that these countries were seeking stability

3. Frankel and Wei (2007) specifically emphasize in their results that China appears to have assigned no weight at all to the yen and euro.

against the euro rather than appreciation against the dollar.

Recall that the 1997–98 crisis forced Asian currencies off their dollar pegs but that, as the crisis passed, Asian authorities reestablished those pegs in a softer form that appears to have been less vulnerable to speculative attack. Several Asian currencies have exhibited a good deal of flexibility during the present financial turmoil as well. But the previous pattern of reversion to relative stability could well be repeated when this crisis eventually recedes. Whether Asian authorities choose to restabilize their currencies and, if so, whether they peg softly against the dollar or a broader basket will serve as an indicator of the postcrisis direction of currency use in the region.

Vehicle Currency, Financial Assets, and Trade Invoicing

The general picture of dollar dominance and minimal euro encroachment is reflected in the other, remaining international roles for currencies.

Table 3.4 presents the shares of key currencies in the foreign exchange markets of Asian countries. As a vehicle currency, the dollar dominates foreign exchange markets in East Asia as it does globally—being on one side of more than 90 percent of all trades in most markets and 84.6 and 88.3 percent of all trades in Japan and Singapore, respectively. The euro is exchanged in 18.7 percent of all trades in East Asia, about half the figure for the Japanese yen.

Figure 3.1 presents information provided by the European Central Bank on the role of the euro in the outstanding stock of international bonds across regions. The euro has a modest share, 23.9 percent, in international debt securities in East Asia. Most international bonds in the region are denominated in dollars, which have a 60.1 percent share; the Japanese yen holds a 3.9 percent share (ECB 2008, table 2).

Table 3.5 presents the shares of currencies in trade invoicing in selected Asian countries. In this sample, the dollar again plays the dominant role. The US currency plays the least role in Japanese trade, where 55 percent of exports and 65.7 percent of imports are invoiced in dollars, and the yen naturally plays a substantial role. The dollar plays the largest role in Indonesian trade. The euro plays a correspondingly small role, in the single digits in percentage terms, for all countries listed. McKinnon and Schnabl (2006, 19–20) also report that trade specifically among Asian countries other than Japan is predominantly invoiced in dollars.

The shares for the euro in nearly all of these functions are smaller than Europe's shares in world GDP, trade, and capital markets. Table 3.6 presents a comparison of the size of the euro area and the European Union relative to the United States and Japan on several measures. The euro area's GDP is comparable to that of the United States, its population larger, and per capita income over 80 percent that of the United States. The

Table 3.4 Currency shares in foreign exchange market transactions

Country	Total ^a	Currency shares (percent) ^b				
		US dollar	Euro	Yen	Pound sterling	Other ^c
China	9.3	98.5	0.7	0.7	1.1	98.9
Hong Kong	174.6	96.1	12.8	10.4	7.4	73.2
Indonesia	2.8	93.0	11.2	8.3	2.6	84.9
Japan	238.4	84.6	18.3	71.1	6.9	19.1
Korea	33.4	92.0	6.1	11.6	4.4	85.9
Malaysia	3.4	97.1	5.9	7.0	4.9	85.1
Philippines	2.3	99.2	2.3	2.3	1.9	94.4
Singapore	230.6	88.3	27.2	25.1	13.2	46.3
Taiwan	14.6	94.6	14.5	23.7	7.5	59.6
Thailand	6.2	94.4	8.8	15.2	2.2	79.3
<i>East Asia</i>	715.6	89.5	18.7	35.6	8.8	47.4
Australia	169.5	91.3	17.5	10.7	7.7	72.8
India	34.1	95.8	9.3	27.7	9.7	57.5
New Zealand	12.3	94.2	10.4	4.6	3.7	87.3
<i>East, South Asia, and Oceania</i>	931.4	90.1	18.0	30.3	8.6	52.9
<i>World total</i>	3,988.1	86.8	36.8	17.0	14.4	44.9

a. Daily averages, in billions of US dollars.

b. Because two currencies are involved in each transaction, the sum of shares comes to 200 percent.

c. Includes all other participating countries' currencies, the major ones being the Swiss franc, Canadian dollar, Australian dollar, and Swedish krona.

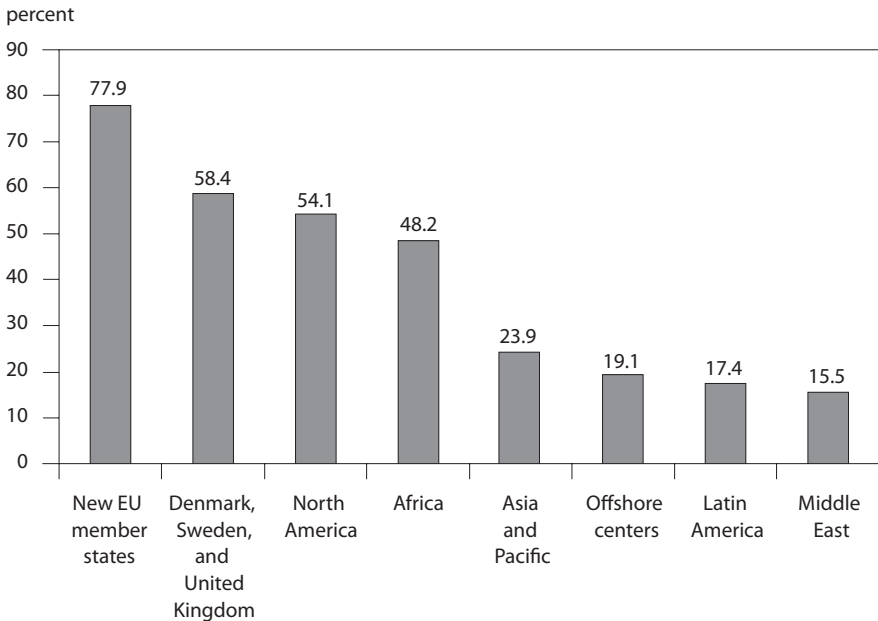
Note: These data aggregate spot, outright forward, and foreign exchange swap transactions and adjust for local interdealer double counting (i.e., "net gross" basis).

Source: Bank for International Settlements, *Triennial Central Bank Survey 2007*.

size of euro area imports is comparable to that of US imports, and euro area exports are much larger than US exports. Among these measures, the euro area is substantially smaller than the United States only in the size of its capital markets.

The smaller share of the euro in East Asian trade and finance is consistent with Europe's share in East Asia's exports, however. Figure 3.2 shows that the euro area is the destination of about 12 percent of the exports of the ASEAN+3 region and the European Union as a whole is the destination of about 15 percent. The dollar's share greatly exceeds the US share in the region's exports, about 17 percent, which has declined from 32 percent in 1986. The reversal of the relative status of Japan and China—with Japan falling from 28 to 8 percent and China rising from 5 to 31 percent between the early 1980s and 2007—is the most striking message of this figure.

Figure 3.1 Share of the euro in the stock of outstanding international debt securities in selected regions, 2007Q4



Note: Narrow measure (i.e., excluding home-currency issuance) as a percent of the total amount outstanding.

Source: ECB (2008).

Asian Regionalism

Since the Asian financial crisis of 1997–98, the members of ASEAN+3 have pursued a number of initiatives to strengthen regional cooperation in international finance (see, for example, Henning 2002, Eichengreen 2002, Bergsten and Park 2002, de Brouwer 2004, Kuroda and Kawai 2004, Rajan and Sirigar 2004, Amyx 2005, and Grimes 2006). These have included the Chiang Mai Initiative (CMI), regional bond funds, bond market initiatives, and, most recently, discussion of the collectivization of the bilateral swap arrangements of the CMI. Sustained use of the dollar stands in marked contrast to the discourse within East Asia on regionalism and the desirability of “self-help mechanisms” to reduce reliance on the IMF and, by extension, the United States and Europe. Nonetheless, by providing a common point of reference for soft pegs and managed floats, the dollar helped to facilitate regional cooperation. Consider the role of the dollar and the relative absence of the euro in these regional projects.

Under the CMI, East Asian governments have concluded about

Table 3.5 Currency shares in Asian trade invoicing

Country	Exports					Imports				
	Euro	Dollar	Yen	Pound	Other	Euro	Dollar	Yen	Pound	Other
Australia, 2007	1.0	74.3	0.5	0.7	23.5 ^a	8.1	52.0	1.9	1.4	36.6 ^a
Indonesia, 2007	1.8	93.2	1.5	0.1	3.3	4.3	83.6	4.1	0.2	7.7
Japan, 2007	8.9	55.0	34.0	0.1	1.3	5.6	65.7	27.6	0.1	1.1
Thailand, 2007	3.5	80.7	6.2	0.5	9.1 ^b	—	—	—	—	—
India, 1999	7.1	85.0	—	—	7.9 ^c	8.1	84.0	—	—	7.9 ^c
Korea, 2003	7.6	84.6	5.3	0.9	1.6	6.1	78.3	14.0	0.6	1.0
Malaysia, 1996 ^d	4.9 ^e	66.0	6.8	1.0	21.3 ^f	—	—	—	—	—

— = no data provided

a. Includes Australian dollar (22.2 and 33.9 percent for exports and imports, respectively).

b. Includes Thai baht (6.7 percent).

c. Calculated as residual above the shares for euro and dollar.

d. Data refer to total trade, without the breakdown for exports and imports.

e. Share for euro is obtained by adding the share for Deutsche mark and approximated shares of other euro legacy currencies.

f. Includes Malaysian ringgit and Singapore dollar (17.8 and 3.5 percent, respectively).

Sources: Bank of Indonesia; Ministry of Finance, Japan; Bank of Korea; Australian Bureau of Statistics; Reserve Bank of India; Bank of Thailand.

Table 3.6 Comparison of Europe, United States, and Japan, 2007

Measure	EU-27	Euro area	United States	Japan
Population (millions)	495	320	302	128
GDP (billions of dollars) ^a	16,830	12,158	13,844	4,384
GDP per capita (thousands of dollars) ^a	34.0	38.2	45.8	34.3
Exports of goods and services (billions of dollars) ^b	1,750	2,064	1,163	714
Imports of goods and services (billions of dollars) ^b	1,966	2,024	2,017	622
International reserves minus gold (billions of dollars)	534	216	60	953
Stock market valuation (trillions of dollars) ^c	13.1	8.4	19.6	4.8
Bond market valuation (trillions of dollars) ^c	23.2	18.8	27.1	8.7
Bank assets (trillions of dollars) ^c	37.7	26.7	10.2	6.6

a. GDP and GDP per capita data for EU-27 and euro area converted into dollars at a rate of \$1.37 per euro (average for 2007).

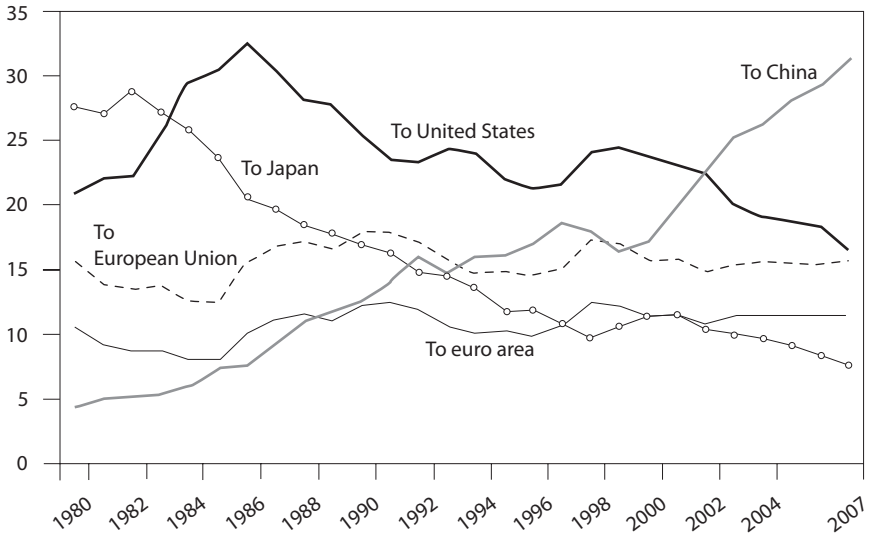
b. Export and import data for EU-27 and euro area exclude intragroup trade.

c. Data are for 2006.

Sources: International Monetary Fund, *International Financial Statistics* (September 2008), *Global Financial Stability Report* (April 2008), *World Economic Outlook* (April 2008), and *Direction of Trade Statistics* (August 2008); European Commission, Eurostat Database.

Figure 3.2 Destination of East Asian exports, 1980–2007

percent of total ASEAN+3 exports



ASEAN+3 = members of the Association of Southeast Asian Nations plus China, Japan, and Korea

Source: International Monetary Fund, *Direction of Trade Statistics*, August 2008.

17 bilateral swap agreements, which are in various states of expiration, renegotiation, and renewal at any one time. Although ASEAN+3 officials sometimes advertise the total size to be \$80 billion, eliminating double counting brings this figure closer to \$55 billion. Thirteen of these are swaps of local currency for US dollars; four are swaps of two local currencies (see also Katada 2008). The US dollar is the only non-Asian currency that is involved. As this paper was finalized, East Asian governments were discussing transforming the CMI from a network of bilateral swap agreements into a collectively managed pool of reserves. If they decide to effectively pool a portion of their reserves in this way, East Asian governments will face decisions on, among other things, the amount of reserves to place under collective management and which currencies to pool. Given the prominence of the dollar in their foreign exchange reserve holdings, exchange rate regimes, trade, and external debt, it would be surprising if the dollar were not their main choice of currency to pool.

The bond market initiatives were launched with the intention of capturing the financial intermediation that is being done in London and New York and of possibly creating a pan-Asian bond market. The accomplishments of these initiatives are patchy, but if they are more successful in the future, these projects will more likely foster the use of currencies from within the region than use of the euro. Former Thai prime

minister Thaksin Shinawatra's October 2008 proposal in the *Financial Times* to create an Asian bond, while obscure on some crucial details, appears to be a case in point (Thaksin 2008). The regional bond funds are small but intended to catalyze the creation of the legal and institutional infrastructure for bond markets. As with the bond market initiatives, the bond funds are more likely to promote local currencies than outside currencies as alternatives to the dollar as the denominator of Asian bonds.

There are, of course, several proposals for common currencies in East Asia or a subgroup within the region. Among the more thoughtful is Peter Kenen and Ellen Meade's analysis of proposals for a common currency for ASEAN (Kenen and Meade 2008, 147–78; see also Choo and Wang 2002 and Chung and Eichengreen 2007). They argue that a monetary union among the original six ASEAN members would probably be more sustainable than one that included China and/or Japan, provided that it were open to membership on the part of the other ASEAN members, Taiwan, and perhaps Korea, Australia, and New Zealand. To make a common currency viable, such a grouping would have to not only continue to liberalize trade but also unify its members' financial markets and strengthen supranational political institutions. Kenen and Meade anticipate that strengthening regional institutions will be the more difficult and lengthy of these two hurdles. In the meantime, the region might consider the proposals for common currency baskets, discussed above, in which the euro could be represented. But consideration of the more modest alternatives also includes discussion of an Asian Currency Unit (ACU) to serve as the numeraire of an "Asian monetary system" or as a parallel currency (see, for example, Kawai 2007 and Eichengreen 2007).

All this is not to suggest that various regional projects will necessarily come to fruition. Rather, it is to say that, when Asians consider reducing dependence on the United States and the dollar, their first preference is to consider alternative currencies within the region, either existing or new, rather than outside currencies such as the euro. The widespread expectation that Europe's share of world GDP will decline in the coming decades, followed a little more gradually by the United States (Wilson and Purushothaman 2003), will reinforce the temptation of officials and private actors in Asia to *bypass* the euro should they pursue any long-run shift away from the dollar. Of course, the problem in Asia is that the attractiveness of the Japanese yen has diminished and the Chinese renminbi is not yet suitable, for a host of reasons, and not likely to be so for a decade or two (see, respectively, Katada 2008 and Bowles and Wang 2008).

Conclusion

This paper surveys the respective roles of the euro and dollar in East Asia, finding that the dollar continues to play a strong role in the region and

that the challenge presented by the euro remains moderate. The dollar pessimist view cannot be dismissed, but the evidence to date is more consistent with dollar optimism. To the extent that East Asian monetary authorities and private markets wish to shift away from the dollar, they are more interested in using local currencies or new regional currencies than in using the euro more heavily. The prospects for the euro and the dollar hinge on the existence and proximity of a “tipping point.” Those wishing to increase the euro’s role as an international currency will want such a point to come soon rather than after the emergence of other currencies as alternatives to the dollar.

Could the present financial crisis prove to be such a historic moment of opportunity for the euro? As this paper was completed, the financial crisis that began in mid-2007 precipitated a deep recession in the advanced economies and substantially reduced the growth outlook for emerging markets. This crisis and the response to it could well profoundly change economies and government institutions but in ways that were difficult to foresee at that juncture. As of the second half of 2008, though, the crisis did not seem to be providing an advantage to the euro in its competition against the dollar. Although the crisis had originated in the US subprime mortgage market, and the George W. Bush administration’s response had been reactive and changing, it had not become a balance-of-payments crisis for the United States. To the contrary, investors around the globe sought safe haven in US Treasury securities and the exchange value of the dollar surged after July 2008. Foreign monetary authorities and financial institutions sought dollar liquidity, opening swap lines with the US Federal Reserve System. East Asia, along with much of the rest of the world, appeared to be embracing rather than rejecting the dollar at that juncture.

The 2007–09 crisis afflicted Europe as well as the United States, of course. European efforts to rescue failing banks contained damage to the financial system, but financial regulation remained fragmented in the European Union and the fiscal response of the member states remained at best loosely coordinated. On the whole, therefore, the European response to the crisis did not appear substantially more decisive, proactive, or strategic than the US response. The crisis made euro area membership more attractive to several EU member states that were not yet part of the monetary union. If the economic size of the euro area grows with its membership in coming years, the euro could become generally more attractive. But this might simply offset the effects of the expected decline in the relative size of the European economy, incomplete integration of its financial markets, and fragmented governance of the euro area (Ahearne and Eichengreen 2007, Coeuré and Pisani-Ferry 2007).

If the 2007–09 crisis does not give a decisive boost to the euro, what other scenarios might create a “rosy future” for the international role of the European currency and how probable might they be? One possibility would be the revival of the European economy, an increase in its potential

growth rate through structural reform and full integration of the European financial and capital markets. Another possibility would be a sustained rise in inflation in the United States, undermining the dollar's roles as a nominal anchor and a reliable store of private wealth. These scenarios are not impossible, but they do not appear to be more likely in the face of the recession beginning in 2008.

The scenario that offers the best chance for the euro probably rests on the historically low rate of private savings in the United States, large fiscal deficits, continued current account deficits, accumulation of external debt, and a trend depreciation of the dollar. If unchecked, this pattern could eventually reach a tipping point. However, the crisis will probably raise US private savings during the recession and might be just the sort of transformative event that changes saving behavior over the long term as well. If US private savings were to increase permanently and the federal government were to solve the long-term fiscal problem posed by entitlement spending, the tipping point could be averted or postponed until after currencies within Asia emerge as alternatives to both the dollar and the euro.

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Euro Area Neighboring Countries

GYÖRGY SZAPÁRY

This paper assesses the rising role of the euro in euro area neighboring countries: the Central and Eastern European countries that joined the European Union in 2004 (new member states, or NMS),⁴ the Southeastern European countries,⁵ Russia, and Ukraine. The international role of the euro has been analyzed and discussed extensively in the academic literature and is also the subject of an annual review by the European Central Bank (ECB). Ewe-Ghee Lim (2006) reviews the relevant literature and discusses the factors that facilitate international currency status, such as the issuing country's large economic size, its well-developed financial system, its political stability, confidence in its currency as a store of value, and network externalities.

While the euro has clearly overtaken the European legacy currencies as a reserve currency, at the *global* level the shares of the dollar and the euro in international reserves have stabilized since 2003 at roughly 64 and 27 percent, respectively. It is difficult to judge whether this is some sort of equilibrium diversification, since confidence and perceptions can change. The ECB itself maintains a neutral position with regard to the role of the euro as an international currency: It will neither seek to promote that role

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4. Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, and Slovenia.

5. Albania, Bosnia and Herzegovina, Croatia, Macedonia, Kosovo, Montenegro, and Serbia.

nor do anything to counteract it (Issing 2008). History teaches us that there is a natural tendency to keep the incumbent global reserve currency as the vehicle, hence for a newcomer to seriously challenge that role is a slow process at best.

At the *regional* level, the situation is quite different from that at the global level. If the economies of countries neighboring a large single-currency area—such as the euro area—are strongly integrated with the member countries forming that area, there are powerful incentives for the countries on the periphery to use the single currency as vehicle and nominal anchor. Since the euro area plays a dominant role in the trade, capital flows, labor movements, and financial systems of the NMS (Darvas and Szapáry 2008), the role of the euro as a vehicle has naturally significantly increased in the NMS. In the Southeastern European countries, similar trends have prevailed, but the economic ties of Russia and Ukraine with the euro area are not as strong.

The rising role of the euro in the region can be assessed by looking at exchange rate arrangements (pegging relationships and the anchoring role of the euro for floaters); currency composition of foreign exchange reserves; and the euro's use in bank lending and deposits, in settling and invoicing foreign trade, and in domestic contracts. The following sections review each of these elements of the use of the euro.

Exchange Rate Arrangements

Pegging Relationships

An increasing number of countries have pegged their exchange rate to the euro over time. Figure 3.3 shows the evolution of the exchange rate regimes in the euro area neighboring countries. Four of the 12 NMS—Cyprus, Malta, Slovakia, and Slovenia—have already joined the euro area. Three countries peg their currencies to the euro under currency board arrangements—Bulgaria, Estonia, and Lithuania—while Latvia maintains a conventional peg to the euro. Among non-EU members, Croatia and Macedonia peg their currencies *de facto* to the euro under managed floating, Bosnia-Herzegovina pegs its currency to the euro under a currency board arrangement, while Montenegro has unilaterally adopted the euro as its currency and so has Kosovo. (Macedonia and Kosovo are not shown in figure 3.3.)

Thus, all the countries in Southeastern Europe except the floaters Albania and Serbia have either adopted the euro as their domestic currency or pegged their currencies to the euro. This is evidence of the role of the euro as a nominal anchor in the euro area neighboring countries that are currently not members of the European Union but are potential candidates.

Figure 3.3 Exchange rate arrangements in the euro area neighboring countries, 1996–2008

Country	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
Bulgaria	Floating	Currency board, Deutsche mark		Currency board, euro										
Cyprus	Peg to ECU +/- 2.25%		Peg to euro			Peg to euro, +/- 15%			ERM2, +/- 15%		Euro			
Czech Republic	Peg, 65% Deutsche mark and 35% US dollar		Floating											
Hungary	Crawling peg, +/- 2.25%, 30% US dollar		70% ECU		70% Deutsche mark		70% euro		Crawling peg, euro +/- 2.25%		Peg to euro, +/- 15%			Floating
Estonia	Currency board, 8 EEK = 1 Deutsche mark						Currency board to euro			ERM2, currency board				
Latvia	Peg to special drawing rights, +/- 1%									Peg to euro	ERM2, +/- 1%			
Lithuania	Currency board to US dollar						Currency board to euro			ERM2, currency board				
Malta	Peg (US dollar, euro, pound sterling)							Peg to euro		ERM2, pegged		Euro		
Poland	Crawling peg (US dollar, Deutsche mark, pound sterling, French franc, Swiss franc)			Peg, 55% euro and 45% US dollar		Floating								
Romania	Floating													
Slovakia	Managed floating									ERM2, +/- 15%				
Slovenia	Managed floating								ERM2 narrow band		Euro			
Albania	Floating (since July 1992)													
Bosnia and Herzegovina	Currency board, 1 KM = 1 Deutsche mark			Currency board, 1 KM = 0.51113 euro										
Croatia	Managed floating			Managed floating, de facto peg to euro										
Montenegro	Peg to Deutsche mark					Euroization								
Serbia	Peg to Deutsche mark					Managed floating								
Russia	Peg to US dollar			Managed float (de facto peg to US dollar)						Managed float against a basket of US dollar and euro				
Ukraine	Peg or de facto peg to US dollar												Floating	

- Pegged to euro
- Pegged to US dollar
- Floating
- ERM2 member
- Pegged to the Deutsche mark or a basket of currencies
- Euro legal tender, through either euro area membership or unilateral euroization

ECU = European Currency Unit EEK = Estonian kroon
 ERM2 = Exchange Rate Mechanism KM = convertible mark

Note: Slovakia adopted the euro on January 1, 2009.

Source: International Monetary Fund, www.imf.org.

The Anchoring Role of the Euro for Floaters

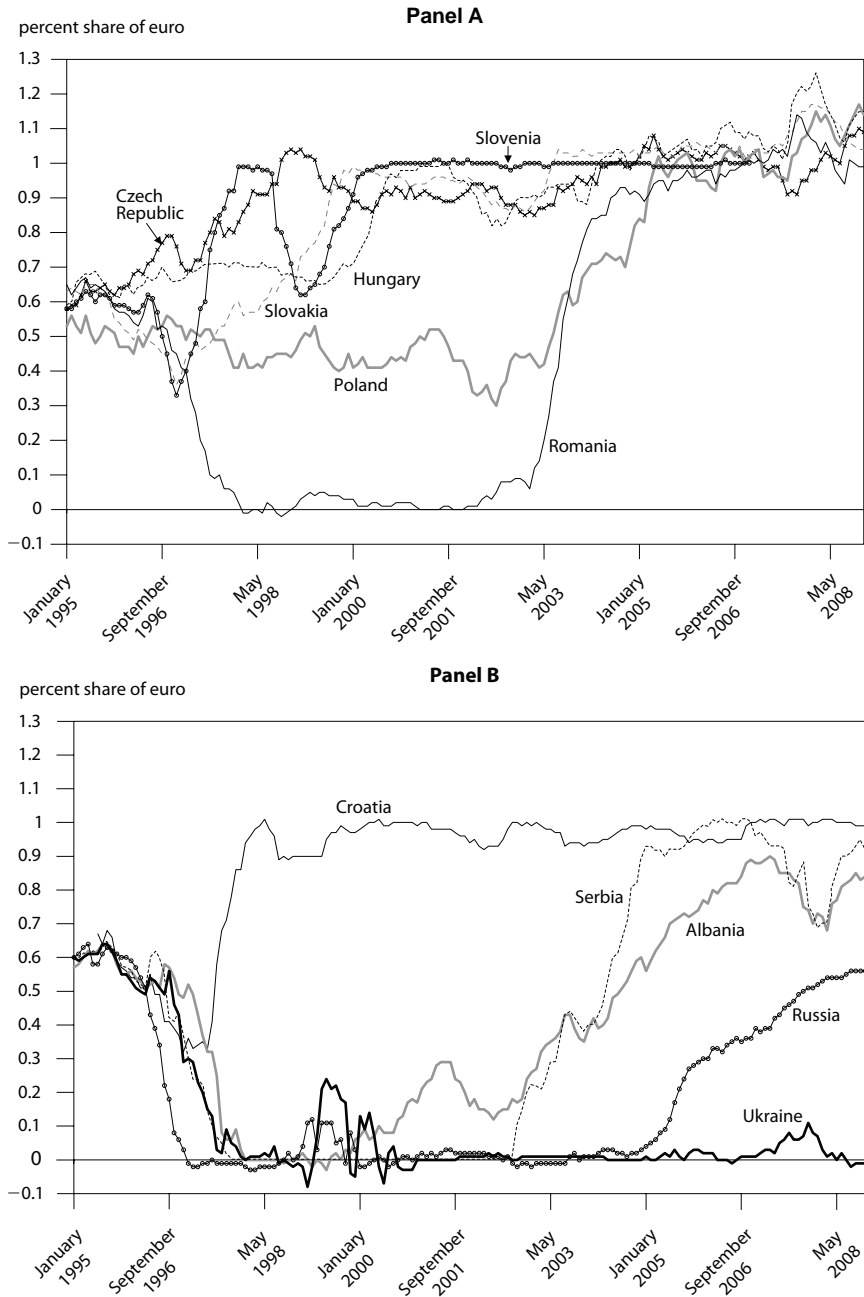
The euro's rise as nominal anchor is also evident among the floaters. Figure 3.4 shows the minimum variance basket for domestic currencies, where an increase in the value indicates an increase of the weight of the euro in the minimum variance basket and hence a greater stability vis-à-vis the euro than against the dollar. Among the EU-member inflation targeters (figure 3.4, panel A), the weight of the euro has significantly increased in all countries. In most countries, it has taken place more or less continuously since 1995. In Poland, however, it has substantially increased only with some lag after the removal in 2000 of the exchange rate band within the framework of inflation targeting. It seems that this action was needed to change the markets' perceptions about the behavior of the zloty's exchange rate, which had been mostly perceived as anchored to the dollar. In Romania, too, the share of the euro in the minimum variance basket of the lei's exchange rate suddenly increased only in 2003. This occurred under managed floating and continued following the adoption of inflation targeting in 2005. In the non-EU members, a similar development occurred in Albania, a floater, and in Serbia after abandonment of the exchange rate peg to the Deutsche mark and the introduction of the managed floating system in 2001 (figure 3.4, panel B).

The Russian ruble was de facto pegged to the US dollar until 2005, but since then it has been managed against a basket of currencies composed of the dollar and the euro. Hence the weight of the euro in the minimum variance basket has increased (panel B). Among the countries considered, only the Ukrainian hryvnia has been pegged to the dollar, but following the recent financial crisis, the hryvnia depreciated by about 90 percent by mid-December 2008.

Implications of the Choice of Exchange Rate Regime

The above review of exchange rate arrangements and developments clearly points to the increasing role of the euro as nominal anchor not only in the EU member countries but also among the non-EU countries in the region. Among the euro peggers and managed floaters, this is a deliberate choice by the authorities, which reflects a recognition of the close economic ties with the euro area economy and hence a desire to use the euro as a stabilizing nominal anchor. In the case of floaters, the greater stability of their currencies against the euro is the result of market forces and reflects the high degree of trade and financial integration with the euro area and the associated perceptions. These perceptions are anchored by the fact that the interest rate reactions of these countries' monetary authorities are influenced and tend to be guided by the steps taken by the ECB, a natural behavior given the close financial integration. Euro adoption expectations also strengthen these market perceptions.

Figure 3.4 Minimum variance baskets, 1995–2008



Note: Values shown correspond to the weight of the euro in the minimum variance portfolio, where the portfolio consists of the logarithmic exchange rate changes against the euro and the dollar. For every month shown, weights were calculated using daily data from the most recent year; outliers were removed from the data before the calculations.

Source: Author's calculations using data from Datastream.

At this point the full impact of the current global financial crisis on the economies of the euro area neighboring countries is not yet known. It might well bring changes in the exchange rate arrangements of some countries, but such changes would not diminish the anchoring role of the euro, since the fundamentals underpinning that role—i.e., the trade and financial integration with the euro area—will not change. The expected timing of euro adoption might be altered: delayed in some countries, expedited in others. However, joining the euro area is not only the stated goal of the countries' authorities but also an obligation under the EU Treaty. Therefore, euro adoption expectations will continue to guide market perceptions in the medium to long run.

The choice of exchange rate regime has implications for the likely inflation performance and indebtedness in foreign currency. With a fixed exchange rate, the price level convergence associated with the catching-up process can take place only via higher inflation, while in the floaters, it can also take place via nominal appreciation of the exchange rate. In the fixers, therefore, inflation will tend to be high, and while borrowing in euros is encouraged because of the low perceived exchange rate risks, real interest rates become very low or negative, leading to rapid growth of credit and to large current account deficits and indebtedness in foreign currency. This has occurred in the Baltic States and Bulgaria. In the floaters, there is the possibility of letting the nominal exchange rate appreciate, which can help to keep down the inflation rate and domestic interest rate, thereby reducing the likelihood of large borrowing in foreign currency. This has been the experience in the Czech Republic and Slovakia.⁶ The risks for the banking systems associated with the large share of foreign-currency borrowings in some of the euro area neighboring countries in the wake of the current global financial crisis are discussed below.

Currency Composition of Foreign Exchange Reserves

Most central banks consider the currency composition of foreign exchange reserves as confidential data, so published data for individual countries are scant. Using information from the International Monetary Fund's database on the currency composition of foreign exchange reserves (COFER) reported on a voluntary basis by some 115 countries, Lim (2006) publishes aggregate data for the currency composition of reserves for the "dollar area" and the "euro area." The latter is defined as "all the European countries immediately surrounding EMU and countries worldwide that largely peg to the euro." This, of course, does not include the euro area

6. Darvas and Szapáry (2008) provide a detailed analysis of the effects of price level convergence on inflation, interest rates, and credit growth under different exchange rate regimes in the catching-up economies of the new EU member states.

proper, where the euro is the domestic currency, but includes several African countries that peg their currencies to the euro.

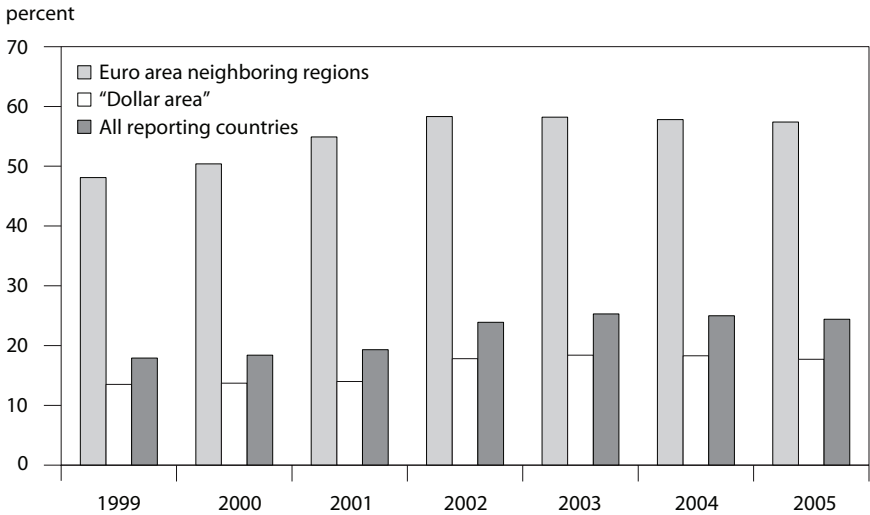
Using Lim's data, figure 3.5 shows the share of euro in foreign exchange reserves for the dollar area and the "euro area" (as defined above) during the period 1999–2005. Two observations can be made about these data: first, that the share of euro reached close to 60 percent in the "euro area" in 2005, while it was only about 25 percent for all reporting countries; and second, that the share of euro had increased fairly rapidly during 1999–2002 (from about 40 percent) but stagnated between 2002 and 2005. While these data point to the increasing role of the euro in the larger set of "euro area" countries that these data refer to, the share of euro in the euro area neighboring countries that we are looking at is likely to be significantly higher than the 60 percent shown in the 2005 IMF data. This is confirmed by those few individual countries that publish data on the currency composition of their reserve holdings (figure 3.6). In Bulgaria and Lithuania, the share is over 90 percent, while in Croatia, Romania, and Slovakia, it is 70 to 85 percent.

The dominance of the euro in foreign exchange reserves in Central and Eastern Europe is a direct result of the euro's role as a nominal anchor, either through the existing pegging relationships or simply due to the financial integration with the euro area. This makes the euro the currency of choice for intervention by the monetary authorities. Countries generally also consider the currency composition of foreign debt when deciding on the composition of reserves. If a country holds a relatively high share of debt denominated in dollars, it will tend to hold a relatively high share of reserves in dollars. Table 3.7 shows the currency composition of external debt for a selected number of countries in the region that report such data. In Romania, for instance, only 68 percent of the external debt is denominated in euros, which may explain why it holds only about 70 percent of its reserves in euros, while in Lithuania, where 99 percent of the external debt is denominated in euros, close to 100 percent of its reserves are held in euros (figure 3.6). However, Lithuania has a currency board arrangement pegged to the euro, which is probably the stronger reason to hold a high proportion of reserves in euros, as is the case for Bulgaria, where only 67 percent of the external debt is denominated in euros but over 90 percent of reserves is held in euros.

Share of the Euro in Bank Loans and Deposits

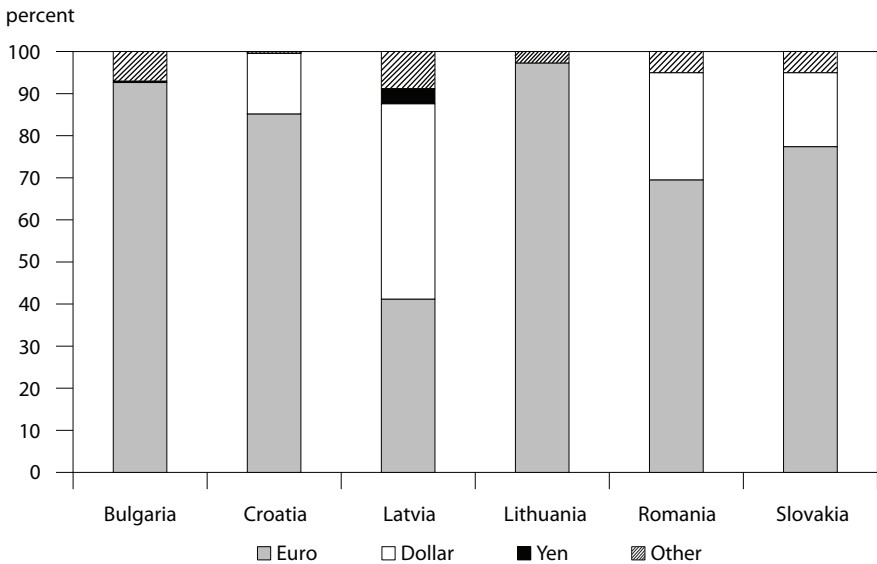
A characteristic of the countries neighboring the euro area is the large share of foreign-currency loans in bank lending and, though to a lesser extent, the large share of foreign-currency deposits (figures 3.7a and 3.7b). The euro dominates foreign-currency loans and deposits, except in Hungary, where Swiss franc loans dominate, and Ukraine, where dollar

Figure 3.5 Share of euro in foreign exchange reserves, 1999–2005



Source: Lim (2006).

Figure 3.6 Currency composition of foreign exchange reserves in selected countries, 2007



Source: National central banks.

Table 3.7 Currency composition of external debt in selected countries, 2003–07 (percent)

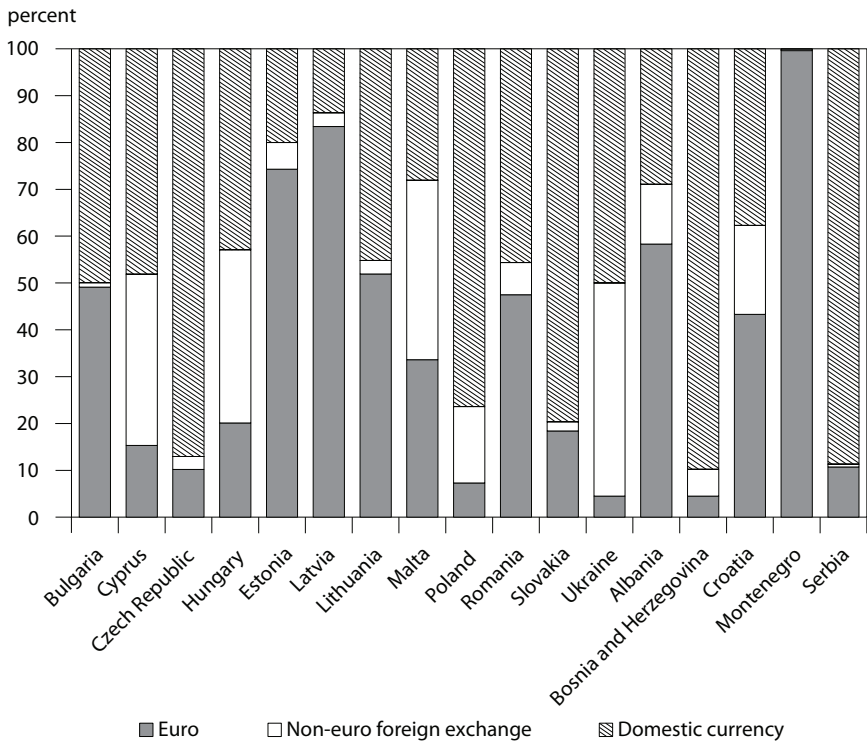
Country	2003	2004	2005	2006	2007
Bosnia					
Euro	18.7	21.4	22.5	25.5	28.2
US dollar	21.0	18.8	19.6	18.3	16.7
Special drawing rights	32.7	33.6	33.7	33.3	32.6
Other	27.6	26.2	24.2	22.9	22.5
Bulgaria					
Euro	37.0	44.4	55.7	63.1	67.3
US dollar	47.2	39.4	29.5	25.7	25.7
Other	15.8	16.3	14.8	11.2	7.0
Estonia					
Euro	100.0	100.0	100.0	100.0	100.0
US dollar	0.0	0.0	0.0	0.0	0.0
Special drawing rights	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0
Lithuania					
Euro	80.4	88.2	n.a.	n.a.	99.4
US dollar	13.3	6.7	n.a.	n.a.	0.0
Special drawing rights	0.0	0.0	n.a.	n.a.	0.0
Other	6.3	5.1	n.a.	n.a.	0.6
Romania					
Euro	53.7	54.4	54.8	61.7	68.4
US dollar	36.0	35.7	34.8	28.6	23.0
Special drawing rights	4.9	3.2	2.0	0.8	0.0
Other	5.4	6.7	8.4	9.0	8.6
Slovenia					
Euro	n.a.	n.a.	n.a.	n.a.	99.6
US dollar	n.a.	n.a.	n.a.	n.a.	0.4
Other	n.a.	n.a.	n.a.	n.a.	0.0

n.a. = not available

Sources: National central banks and ministries of finance.

loans prevail. In 2007 the share of foreign-currency loans was generally 50 percent or more of total outstanding loans and reached 80 percent or more in some countries operating currency boards where the perceived exchange rate risk had been low (Estonia and Lithuania). In countries with floating exchange rates, the shares were also high: 72 percent in Albania, 59 percent in Hungary, and 55 percent in Romania. In these countries, foreign-currency borrowing was encouraged by the positive spreads between the domestic and the relevant foreign interest rates. In the Czech Republic, where interest rate spreads are negative, the share was only 9 percent in 2007. Foreign-currency borrowings were facilitated by the

Figure 3.7a Composition of bank loans, 2007



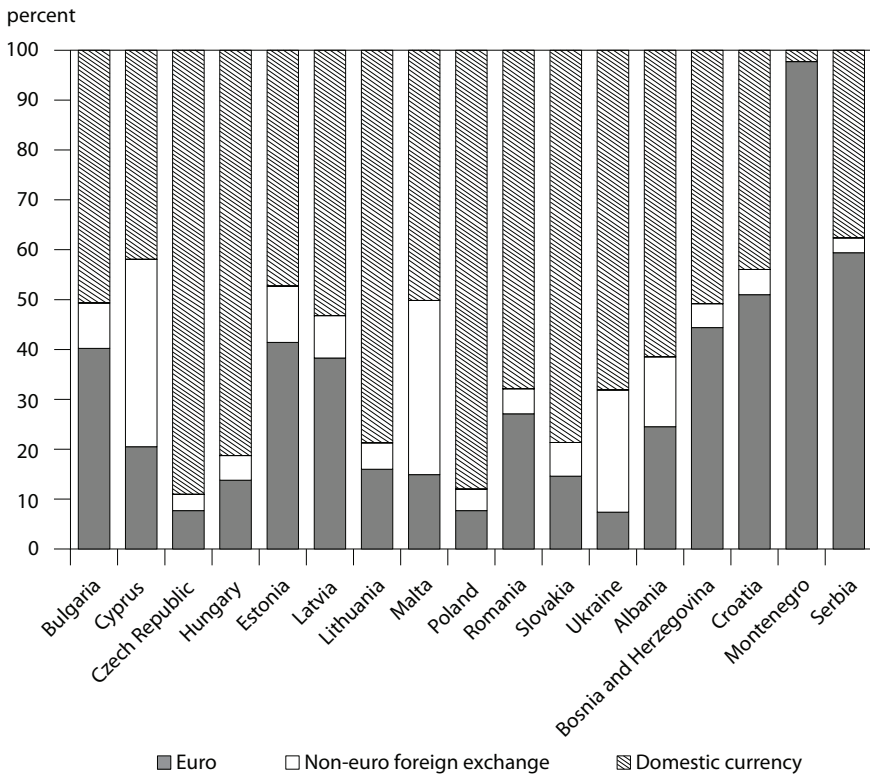
Note: Data for Albania and Serbia are from 2006.

Source: European Central Bank.

dominant role of foreign-owned banks in Central and Eastern Europe. With the exception of Cyprus, Malta, and Slovenia, the share of foreign-owned banks in the total assets of the banking system ranges from 60 to 90 percent in the NMS (Darvas and Szapáry 2008, 33–34).

Lenders and borrowers underestimated the dangers in foreign exchange loans, as the risks had been masked by rapid real convergence in the countries under consideration and the expectation that this trend would continue uninterrupted, increasing the salaries toward euro area levels and keeping the exchange rates stable or on an appreciating trend. However, the high share of foreign-currency loans has exposed these countries to serious exchange rate risks when there is a sudden change in market conditions, as became evident during the current global financial crisis. Since mid-2008, the exchange rates of the currencies of Hungary, Poland, Romania, Russia, and Ukraine have depreciated considerably, in Ukraine by as much as 90 percent. The consequent increase in the bur-

Figure 3.7b Composition of bank deposits, 2007



Note: Data for Albania and Serbia are from 2006.

Source: European Central Bank.

den of debt servicing strains the payment capabilities of the borrowers, particularly of households. Combined with the sharp economic downturns in these countries, this situation is likely to lead to an increase in the volume of nonperforming loans and erode the banks' capital. In response, banks are cutting back on their lending, further exacerbating the economic downturn.

The bank bailout packages introduced in Western Europe and the United States help the mother banks to continue to finance their subsidiaries in Central and Eastern Europe, although many of them have reduced the flow of financing and have shortened the maturities. The IMF's stand-by credit arrangement for Hungary has two funds, one for recapitalizing banks and the other for providing liquidity to banks that wish to take advantage of these facilities. All these measures are useful, but the banking systems in several Central and Eastern European countries remain

exposed to significant risks due to the high volume of foreign-currency obligations, and the situation needs to be monitored carefully.

A main lesson from this situation is that the authorities should take measures to slow down the growth of foreign-currency lending, particularly to the unhedged household sector. Many measures have been used around the world with more or less effectiveness (World Bank 2007). The problem with most of them is that they distort the markets and can be circumvented. The most effective would be a tax on interest payment on foreign-currency credit (possibly combined with higher reserve requirements on the banks' foreign currency liabilities), which would effectively raise the cost of borrowing in foreign currency and slow its growth. This can be reinforced by a mandatory maximum limit on the loan-to-value ratio for household mortgage loans, which has been growing especially fast.⁷

Role of the Euro in Settling/Invoicing Foreign Trade

Another way to assess the role of the euro is to look at the euro's share in settling/invoicing foreign trade. The share of the euro in trade invoicing and settlement has increased over the years (ECB 2008, 42–44), and as can be seen from figures 3.8a and 3.8b, it is higher than the share of exports to and imports from the euro area, which points to the importance of euro-denominated trade transactions with third countries.

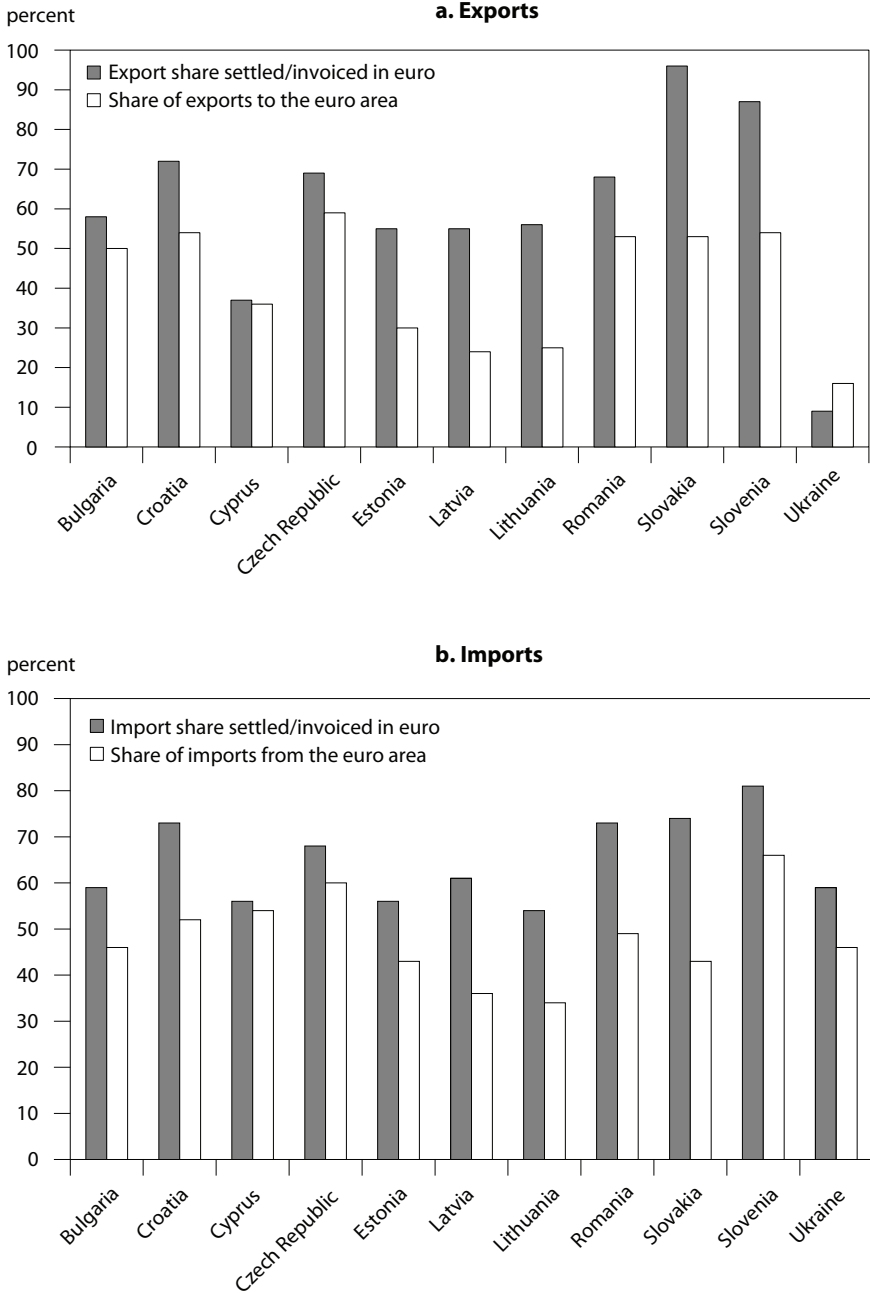
Using data for 2000 and 2002, Linda S. Goldberg (2005) calculates an optimal invoicing choice for the EU accession countries (now new member states) based on the observation that invoicing practices depend largely on macroeconomic volatility (hedging) and on the vehicle currency in goods that are reference priced and traded on organized competitive markets (herding). She concludes that some of these countries might be pricing too much of their trade in euros rather than in dollars and thus might be taking on excessive risks in international markets. However, the pegging relationships and the increased role of the euro as a nominal anchor in these countries since the time to which her data refer provide compelling reasons for traders to invoice in euros, as the domestic currency will tend to be less volatile vis-à-vis the euro than the dollar, at least in normal times.

Role of the Euro in Domestic Contracts and Cash Holdings

A feature for which there is no readily available data is the use of the euro in domestic contracts in the euro area neighboring countries. It can be observed, however, that the euro is frequently used in contracts for

7. The shortcomings of the existing institutional architecture in Europe to deal with the current financial crisis are discussed in Darvas and Pisani-Ferry (2008).

Figure 3.8 Euro's share in settling/invoicing foreign trade, 2006



Source: European Central Bank.

renting out office space and residential property, mostly when the renters are foreign companies or individuals. Hotel room rates are also typically tied to the euro in several countries. The motivation for such practices may be the same as for invoicing in euros for trade.

Euro cash holdings outside the euro area can be gauged by euro banknote trade figures. The ECB (2008, 51) estimates that Eastern Europe accounted for 37 percent of euro banknote purchases from and 24 percent of sales to countries outside the euro area in 2007. A survey commissioned by the Oesterreichische Nationalbank in 2007 revealed that the holding of euro banknotes varies considerably across countries and tends to be higher in Southeastern European countries than in Central and Eastern European countries. This may be a reaction to the high inflation experience of the former Yugoslavia and of some of its successor countries (Backé, Ritzberger-Grünwald, and Stix 2007). The relatively high euro cash holdings in the euro area neighboring countries are also due to the proximity of these countries to the euro area, which is the main business, shopping, and tourism destination for people traveling from these countries. There is also some evidence that high-denomination euro banknotes are used in these countries for large cash transactions in the informal economy.

The Global Financial Crisis and Prospects for Euro Area Enlargement

Before the current financial crisis, it looked like the greatest challenge for countries hoping to adopt the euro was to satisfy the Maastricht inflation criterion. In December 2008 only Slovakia met this criterion (table 3.8). Inflation was especially high, far exceeding the criterion, in the NMS with fixed exchange rates. While inflation is now abating in the NMS due to the sharp economic downturn, the pressures on the fiscal deficits and government debt due to the slowdown in growth and the rise in interest rates are rising. Furthermore, with the inflow of foreign portfolio investments that had previously kept the long-term interest rates low now drying up, some countries will also have difficulties in meeting the interest rate criterion. Indeed, among the non-euro area members, only the Czech Republic and Slovakia met the criterion for long-term interest rates in December 2008, while in July 2008, only Hungary and Romania had not met that criterion. With regard to the fiscal deficit, at least four countries will not meet the criterion, based on the EU Commission's January 2009 forecast. More countries might fail to meet the criterion by the end of 2009. It now looks like satisfying the criteria for fiscal deficit and long-term interest rate will be equally challenging and perhaps even more difficult than meeting the inflation criterion.

Recent events on global financial markets have convincingly demonstrated that membership in the euro area provides protection against

Table 3.8 Fulfillment of the Maastricht criteria in the new member states

Country	Harmonized indices of consumer prices, December 2008 (12-month average rate of change)	Country	Long-term government bond yields, December 2008	Country	General government surplus (+) or deficit (-), 2009 ^a	Country	General government gross debt, 2009 ^a
Average of three lowest EU members	2.6	Average of three lowest-inflation countries	3.57				
Reference value	4.1	Reference value	5.57	Reference value	-3.0	Reference value	60.0
Euro area	3.3	Euro area	3.71	Bulgaria	2.0	Estonia	6.1
Slovakia	3.9	Malta	4.17	Cyprus	-0.6	Bulgaria	12.2
Poland	4.2	Czech Republic	4.30	Czech Republic	-2.5	Lithuania	20.0
Cyprus	4.4	Slovenia	4.56	Malta	-2.6	Romania	21.1
Malta	4.7	Cyprus	4.60	Slovakia	-2.8	Slovenia	24.8
Slovenia	5.5	Slovakia	4.72	Hungary	-2.8	Czech Republic	29.4
Hungary	6.0	Poland	5.70	Lithuania	-3.0	Slovakia	30.0
Czech Republic	6.3	Bulgaria	7.76	Estonia	-3.2	Latvia	30.4
Romania	7.9	Hungary	8.31	Slovenia	-3.2	Cyprus	46.7
Estonia	10.6	Romania	8.38	Poland	-3.6	Poland	47.7
Lithuania	11.1	Lithuania	9.00	Euro area	-4.0	Malta	64.0
Bulgaria	12.0	Latvia	9.03	Latvia	-6.3	Euro area	72.7
Latvia	15.3	Estonia	n.a.	Romania	-7.5	Hungary	73.8

n.a. = not available

a. January 19, 2009 forecast of the European Commission, Directorate General for Economic and Financial Affairs (DG ECFIN).

Note: Grey indicates countries that did not meet criterion.

Source: European Commission, Eurostat Database.

exchange rate risks at times of financial crisis. As a result, the authorities of many NMS now want to accelerate the process of joining the euro area. Paradoxically, the challenges may now be more difficult than they were before the crisis. The unambiguous lesson to be drawn from this is that countries should make progress toward preparing for euro adoption and satisfying the Maastricht criteria in a sustainable manner during good times.

Conclusion

All indicators point to the very important role of the euro as a vehicle currency and nominal anchor in the euro area neighboring countries. At this regional level, the role of the euro far exceeds its role at the global level. This is true not only for the new EU member states but also for the non-EU member countries in Southeastern Europe. The driving forces behind this rising role are the close trade and financial integration of these countries with the euro area and the expectations that these countries will one day join the currency union, even if not all of them are members of the European Union yet. These considerations do not apply to Russia and Ukraine, although the former has included the euro next to the dollar in the currency basket against which it manages the exchange rate of the ruble.

The close integration with the euro area also presents challenges. The widespread borrowing in euros or other foreign currencies at low interest rates by domestic residents has led to rapid growth of credit, fueling inflation and leading to large current account deficits and exposure to foreign exchange risks in many countries of the region. The rapid depreciations of the currencies in a number of these countries in the wake of the global financial crisis has brought to the fore the dangers that this situation can present for the domestic financial systems. The authorities will have to pay more attention to this problem in the future and take effective actions to rein in foreign-currency lending. The current financial crisis is not expected to alter the anchoring role of the euro in these countries, because the fundamentals underpinning that role will not change.

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Middle East and Oil Exporters

MOHSIN S. KHAN

The Middle East region is a US dollar zone. The euro's role remains very much secondary to that of the dollar in foreign trade, holdings of reserve assets, and exchange rate regimes. Indeed, on the trade side the role of the euro is now less than that of the pre-euro European currencies. At the same time, however, there is considerable discussion in the region about reducing the dominance of the dollar and increasing the relative importance of the euro.

This paper describes the euro's current role in the Middle East and North Africa (MENA) region⁸ and in the Middle East oil exporters, specifically the Gulf Cooperation Council (GCC) countries.⁹ I focus on three main areas: the direction of imports and exports; the growth in official reserve assets; and the exchange rate regime. The discussion on the MENA region essentially serves as a backdrop to a more detailed look at the GCC countries, which now represent more than one-half of MENA's GDP, over 60 percent of exports and over 50 percent of the

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8. MENA comprises Algeria, Bahrain, Djibouti, Egypt, Iran, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the United Arab Emirates, and Yemen.

9. The GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

region's imports. Over the last decade or so, the economic epicenter of the region has clearly shifted from Eastern Mediterranean countries to the GCC countries; what happens in the Persian Gulf countries has an important bearing on what happens in the region, and because they are major oil exporters and large financial investors, they also play a systemic role in the world economy.¹⁰

Since the debate on the dollar versus the euro has been most active in the GCC, any changes in favor of the euro will have been led by the choices made in these countries. In fact, with the GCC Monetary Union planned for 2010, the choice of an appropriate exchange rate regime for the single currency is going to be one of the most critical decisions for the GCC and the MENA region. As mentioned, the paper starts with the MENA region as a whole and then looks more closely at the GCC countries. The final section draws some conclusions about the future role of the US dollar and the euro.

Role of the Euro in MENA

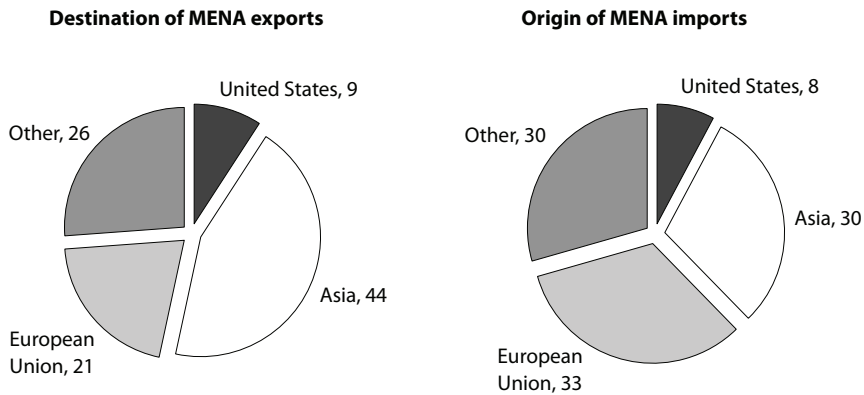
Trade Patterns

Overall, US dollar transactions dominate MENA exports and imports. Although MENA exports to the United States represent only about 9 percent of total exports, less than half of the exports going to the European Union (figure 3.9), it is estimated that over 60 percent of exports are denominated in US dollars for two primary reasons. First, about 70 percent of MENA exports are oil, which is priced in dollars in international markets. And second, exports to Asia, which in 2007 represented 44 percent of MENA exports, are also largely denominated in US dollars. Interestingly, the share of exports going to Europe has been on the decline, falling from 26 percent in 2000 to 21 percent in 2007, while the share of exports to the United States has remained virtually constant. Even if oil exporters are excluded, the share of exports to Europe has fallen from 50 percent in 2000 to less than 40 percent in 2007.

On the import side, the role of Europe, and therefore the euro, is much greater. Imports from the European Union account for the largest share of MENA imports (33 percent), with Asia at 30 percent and the United States around 8 percent (figure 3.9). But here again, as with exports, the share of Europe in MENA imports has fallen from 39 percent in 2000 to 33 percent in 2007. This decline has been mostly offset by the increase in the share of imports from Asia, which rose from 22 percent in 2000 to 30 percent in 2007.

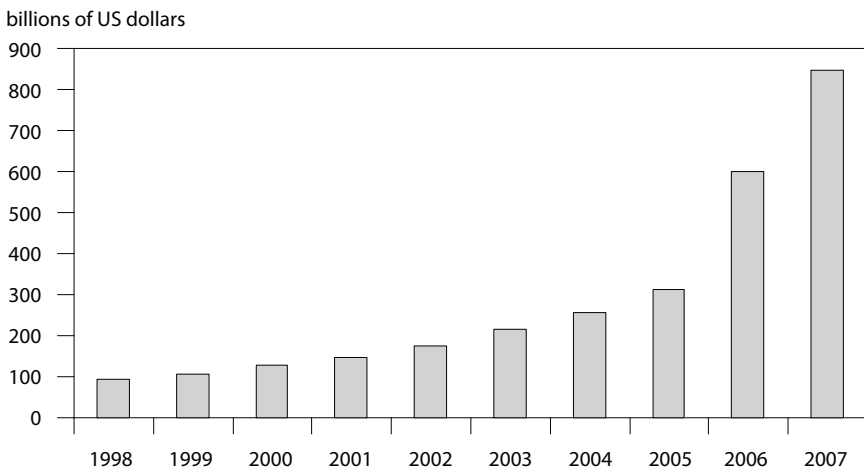
10. A useful description of the GCC by the European Central Bank is available in Sturm et al. (2008).

Figure 3.9 Direction of MENA trade, 2007 (percent)



Source: International Monetary Fund, *Direction of Trade Statistics*, 2008.

Figure 3.10 MENA's gross official reserves, 1998–2007

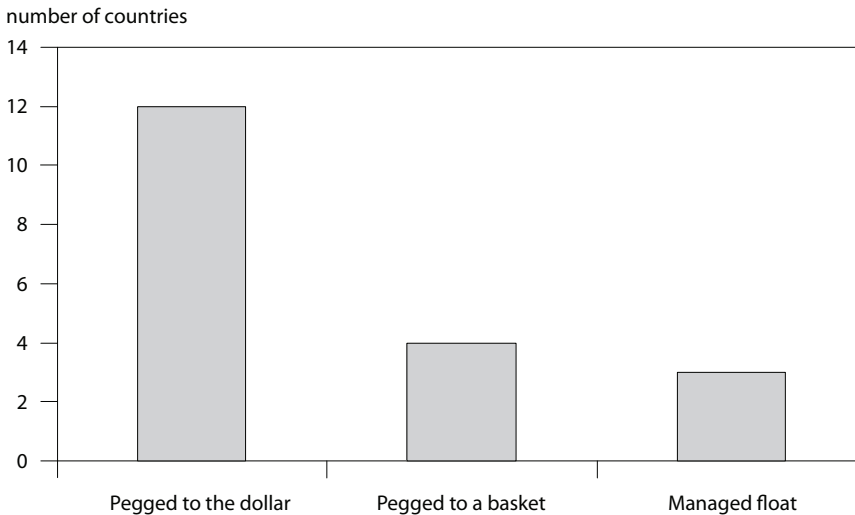


Source: International Monetary Fund, *International Financial Statistics*, 2008.

Official Reserve Assets

The large current account surpluses generated by oil-exporting countries have dramatically increased MENA's official international reserves. Gross official reserves of the region averaged about \$180 billion during 2000–2004 and rose more than fourfold to \$830 billion by 2007 (figure 3.10). Despite the sharp decline in world oil prices in the second half of 2008, gross in-

Figure 3.11 Exchange rate arrangements in MENA



Source: International Monetary Fund, *Classification of Exchange Rate Arrangements and Monetary Frameworks*, 2008.

International reserves of MENA were well over \$1 trillion by end-2008. The foreign assets managed by special-purpose government funds, commonly known as sovereign wealth funds (SWFs), are not included in official central bank reserves. SWFs in MENA are estimated to hold over \$1 trillion.¹¹

The currency distribution of MENA official reserves is undisclosed. While the International Monetary Fund (IMF) does receive the currency composition of reserves from some MENA central banks, it publishes the data only in aggregate form. Anecdotal evidence suggests that while euro holdings are growing, particularly in the oil exporters, the bulk of official reserve assets are held in US dollar financial assets.

Exchange Rate Regimes

Virtually all MENA countries maintain a pegged exchange rate regime, with the exception of Algeria, Sudan, and Tunisia. Twelve countries are pegged to the US dollar, four are pegged to a basket, and three operate a managed float (figure 3.11). However, two of those countries that classify

11. Accurate figures on the assets of SWFs, in particular the larger ones in MENA, such as the Abu Dhabi Investment Authority (ADIA) and the Qatar Investment Authority (QIA), are difficult to obtain as they are not made publicly available. A variety of unofficial estimates place the assets of the GCC SWFs anywhere from \$1 trillion to \$2 trillion.

themselves as managed floaters—Algeria and Tunisia—operate as if they were pegged to a basket.

In the countries that are pegged to a basket, the euro has a higher weight than the US dollar in North Africa. For example, in Morocco the relative weights are 80 percent euro and 20 percent US dollar; in Tunisia the euro has a weight of 55 percent and the dollar 45 percent. This is not surprising because North African countries, and particularly Morocco and Tunisia, have close historical trade links with Europe. Algeria's basket is made up of 60 percent dollar and 40 percent euro, basically in line with exports and imports. Libya and Syria are pegged to special drawing rights (SDR), in which the US dollar has a 45 percent weight and the euro 29 percent.

Overall, therefore, MENA countries currently maintain a peg to the US dollar, although there is growing interest in some of them to move to a basket peg. Any move to peg to a basket will undoubtedly lead to a significantly greater role for the euro, particularly if the basket is constructed using trade shares. On the export side, aside from the fact that oil is priced in US dollars, the euro would have a weight of about 20 to 25 percent. Using imports gives the euro about a 30 to 35 percent share in the basket.

Oil Exporters' Perspectives

The MENA region has 11 oil exporters, of which the GCC is the largest as a group.¹² It is primarily in the six GCC countries that there has been a very active discussion on diversifying away from the US dollar and having the euro take on a greater role in foreign asset holdings and exchange rate policy.¹³

The GCC was established in May 1981 with the explicit aim of forging closer ties and stronger links among the six member states.¹⁴ A few months later (in November 1981) member states signed an agreement to establish the GCC Free Trade Area and outlined the steps for closer economic cooperation. On December 31, 2001, the GCC members agreed to a revised economic agreement to advance economic integration and lead to a common market by 2008 and a monetary union by 2010.

The GCC is a relatively homogeneous group of countries, sharing a common cultural and political history,¹⁵ and are mainly exporters of oil,

12. Other large oil producers in MENA include Algeria, Iran, Iraq, and Libya. In Syria oil production is declining rapidly.

13. As mentioned in the previous section, Algeria and Libya are pegged to a basket that includes the euro. Iraq has a managed floating regime, although de facto it is a crawling peg. Iran's diversification away from the US dollar has been dictated by political factors and sanctions.

14. Initially, Iraq was also involved in the discussions to establish the GCC but in the end decided not to join.

15. Edmund O'Sullivan (2008) has a very extensive discussion of the history of the Gulf

gas, and refined products. They jointly account for over 40 percent of global oil reserves and 23 percent of natural gas reserves. Oil and gas production contributes over half of total GDP and three-quarters of total exports and government revenues. The combined GDP of the GCC countries in 2008 was over \$1 trillion, and they have an average per capita income of \$25,000, making them the wealthiest group in the developing world.

Much progress has been made toward the goal of a full-fledged GCC Monetary Union.¹⁶ GCC countries have virtually unrestricted intraregional mobility of goods, national labor, and capital and full convertibility; regulations and supervision of the banking sectors are being gradually harmonized. The GCC common market was established in January 2008 and provides GCC citizens equal treatment in all economic activities. All members (except Kuwait since May 2007) have pegged their currencies to the US dollar since 2003, and a common external tariff was introduced that same year. Although the GCC currencies were de facto pegged to the US dollar for decades,¹⁷ a single GCC currency is expected to encourage trade and financial integration and facilitate foreign direct investment.

International interest in the GCC has been increasing recently mainly because of the dramatic rise in oil prices since 2004. This led to larger current account surpluses and a massive build-up of foreign assets. Maintaining a peg to the US dollar started to be questioned on grounds that it was contributing to global imbalances. The GCC (and, of course, China) were running large current account surpluses, while the United States was experiencing large current account deficits. For example, the current account surplus of GCC countries rose from \$88 billion in 2004 to \$200 billion in 2007 (and nearly \$300 billion in 2008), and official foreign reserves (excluding foreign assets held by SWFs) reached \$420 billion. Therefore, to reduce global imbalances, the GCC current account surpluses needed to be reduced, and changing the exchange rate was considered one solution. The GCC countries were urged to abandon the US dollar in favor of a more flexible regime—either a basket peg or managed floating.¹⁸ An appreciation of the currency against the US dollar would increase imports (exports would not be affected since oil is priced in US dollars), thereby reducing the current account surplus.

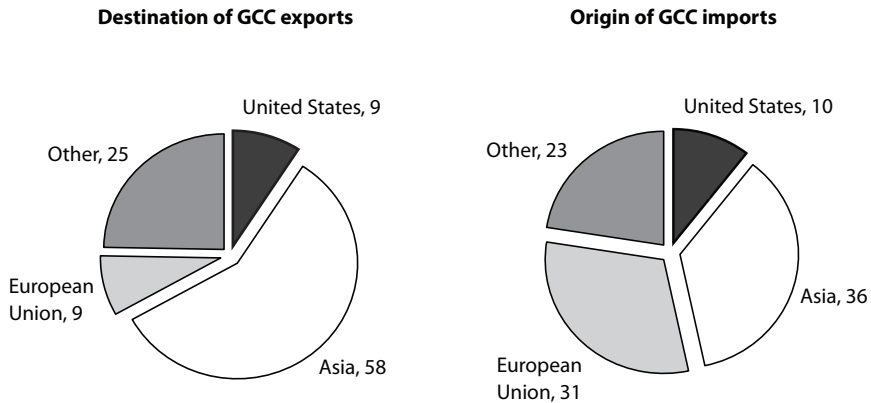
states. Marcus Noland and Howard Pack (2007) cover some of the Gulf countries in their study of the Arab economies.

16. Willem Buiter (2008) questions whether the political requirements for the GCC Monetary Union are met. The political commitment, however, appears firm.

17. During 1980–2002, Bahrain, Qatar, Saudi Arabia, and the United Arab Emirates (UAE) were pegged with bands to the SDR but de facto pegged to the US dollar. Oman was pegged to the US dollar and Kuwait to an undisclosed basket.

18. Maintaining the US dollar peg but changing the parity (i.e., a revaluation) was also proposed.

Figure 3.12 Direction of GCC trade, 2007 (percent)



Source: International Monetary Fund, *Direction of Trade Statistics*, 2008.

With the recent drop in oil prices and the appreciation of the US dollar, calls for changing the GCC exchange rate regimes to correct global imbalances have died down. But the general question still remains—should the GCC countries continue pegging to the US dollar or move to another regime such as pegging to a basket, which would naturally include the euro, or even managed floating? While for now, the member states, except Kuwait, have stated their commitment to the dollar peg, they have also stated that all options are open for the single currency when the GCC Monetary Union is established in 2010.¹⁹

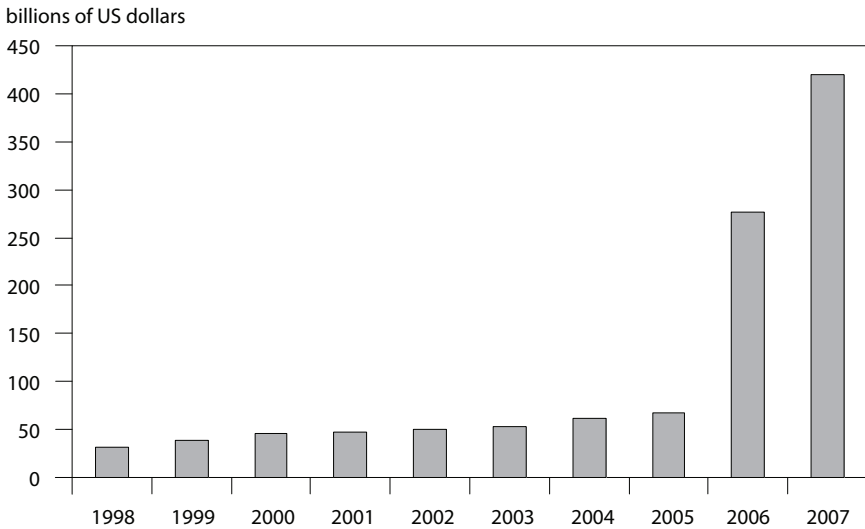
Following the analysis in the previous section on MENA, I now turn to GCC trade patterns, the currency composition of reserve assets, and then address the main question of the exchange rate regime.

Trade Patterns

The GCC economies have traditionally been very open to international trade in goods and services (and labor). As figure 3.12 shows, Asia has the largest share of GCC exports (58 percent in 2007), with the United States and the European Union accounting for around 9 percent each. However, since oil is priced in US dollars, even the exports to the European Union are denominated in US dollars. On the import side, the European Union accounts for about 31 percent, so the rest of the imports are priced in US dollars. As in the case of MENA, it is worth noting that the share of imports

19. The Kuwait government has stated that it is committed to joining the monetary union. Oman, on the other hand, while maintaining the dollar peg, intends to join only at a later stage.

Figure 3.13 GCC gross official reserves, 1998–2007



Source: International Monetary Fund, *International Financial Statistics*, 2008.

coming from the European Union has been declining—from 34 percent in 2000 to the current 31 percent. The share of the United States has also been declining while that of Asia has been growing steadily. Intra-GCC trade has been low, reflecting the dominant role of oil in these economies, but with economic diversification increasing, trade among them has been rising, albeit from a very low base.

Official Reserve Assets

The spectacular rise in oil prices from 2004 to mid-2008 led to large current account surpluses in the GCC and a corresponding increase in official foreign exchange reserves. The cumulated current account balance of the GCC from 2003 through 2007 amounted to about \$725 billion (and is estimated to be over \$1 trillion at end-2008). Official reserves of the GCC countries, which hold over half of MENA reserves, rose to \$420 billion in 2007 (figure 3.13). Most of these reserves are held in US dollar financial assets. In 2007 the US dollar share was over 90 percent (see, for example, Setser and Ziemba 2008). Two arguments have been made to justify the holding of over 90 percent of GCC reserves in US dollars. First, the peg with the US dollar makes the United States an obvious destination for investing. Second, and related to the first point, US financial markets are able to handle very large volumes of foreign inflows without much trouble.

GCC SWFs are opaque and reluctant to reveal information about their

holdings.²⁰ At present, there is no official information on the total value, distribution, or currency composition of their assets. Since there are no accurate numbers on holdings of SWFs, trying to obtain the currency composition of their assets is a somewhat futile task. It is quite likely that the US dollar share is lower than for official reserves and the euro share correspondingly higher because of the long-term nature of SWF assets. But SWFs also have a lot of foreign direct investment in the MENA region. In most cases, their investments and the returns on those investments are in US dollars. All in all, how much they hold in US dollars or in euros is almost impossible to say, although anecdotal evidence—mainly press reports—suggests that the share of US dollar-denominated assets far exceeds euro-denominated financial assets in their portfolios. Brad Setser and Rachel Ziemba (2008) assume that about 50 percent are in US dollars, largely on the basis of press reports that the Kuwait Investment Authority's (KIA) dollar assets are around 40 percent of its total financial assets.²¹

Exchange Rate Regimes

GCC member countries officially pegged their currencies to the US dollar on January 1, 2003, as an explicit step toward monetary integration. Although at that time the countries (except Kuwait) were already pegged to the US dollar, the decision was based on the expectation that the dollar peg would maintain stability and strengthen confidence in the economies, and the countries would go into the monetary union at those parities. As such, GCC countries have pursued macroeconomic policies consistent with fixed rates to the US dollar. The flexible factor markets in these countries, particularly the labor market, have helped them in this regard. Also, GCC members have accumulated large foreign exchange reserves, supporting the credibility of the peg and discouraging speculation against their currencies.

By and large a good case can be made for the GCC countries pegging to the dollar. Macroeconomic conditions in the GCC have been stable for the last two decades, even during periods of dollar fluctuations, and over time the cyclical synchronicity between the GCC and the United States has been increasing, despite the apparent divergence in 2008. The peg to the US dollar has helped the region avoid nominal shocks from geopolitical

20. An international working group of sovereign wealth funds—comprising 26 countries, including some from the GCC—has reached agreement on a draft set of voluntary, generally accepted principles and practices (GAPP) that reflects the current practices of SWFs or actions to which they aspire. The GAPP is intended to guide the conduct of investment practices of SWFs, including revealing more information on the legal framework, governance and institutional structures, risk management, and investment policies.

21. Neither the KIA nor the Kuwait government has verified this estimate of the share of US dollar assets, which appears to be on the low side.

events feeding into the economy. These geopolitical risks are likely to continue, placing a premium on the US dollar peg.

The dollar peg provides a well-understood and credible anchor for monetary policy (Abed, Erbas, and Guerami 2003). The peg has clearly anchored inflationary expectations at low levels and provides certainty about future exchange rate movements. For example, notwithstanding the jump in inflation in 2007–08 in the GCC, forward markets continue to reflect confidence in the dollar peg. The peg is obviously easy to administer and does not require the institutions necessary for implementing an independent monetary policy. Such institutions would need to be built, become effective, and establish credibility. Also, since the monetary transmission mechanism is weak in the GCC countries, given the absence of developed domestic capital markets, the shallowness of credit markets, and the limited effectiveness of interest rates, a peg seems to be the only realistic option as a monetary policy anchor.

The exchange rate peg simplifies trade and financial transactions, accounting, and business planning, as well as monetary coordination among the member countries. Exchange rate risk can be easily hedged, even in the absence of a well-developed domestic private forward exchange market, as agents can work through US dollar markets. With cross rates fixed, intra-GCC transactions benefit as traders and investors do not have to take on any exchange rate risk, thereby encouraging further integration of the individual GCC economies. Absent developed financial markets, and particularly forward markets in which to hedge, the central banks would have to provide forward cover, as is the case in most developing countries with flexible exchange rates.

Labor-market flexibility can support international competitiveness under a fixed exchange rate regime. GCC countries face a relatively elastic supply of labor (mostly unskilled) from low-income countries in the Middle East and South Asia. Non-nationals make up some two-thirds of employment in the GCC members. These countries have been applying the policy of nationalization of the labor force in a very flexible manner, to avoid labor shortages and minimize output disruptions.

Major oil exporters generally prefer pegged exchange rates. Of the 26 countries whose oil exports account for over 50 percent of their total exports, 18 (including the GCC countries) have conventional fixed pegs. Even some countries that are classified as managed floaters (for example, Algeria and Kazakhstan) keep the volatility of their exchange rates within a tight band, making them appear akin to peggers. This implies that in countries with foreign exchange coming primarily from the dominant export commodity, and subject to considerable price volatility, it is more difficult to operate a free foreign exchange market, particularly if the institutions to support it are not well developed.²²

22. This is one of the main reasons that Jeffrey Frankel and Ayako Saiki (2002) argue for

Of course, the dollar peg has a number of disadvantages too. First, it imports US monetary policy, which may at times not be appropriate for local needs.²³ With an open capital account, the dollar peg requires the GCC countries to follow US interest rate policy, which has the potential to result in policies unsuited to their business cycles.²⁴ If the divergences between business cycles are likely to be temporary, policy tools other than interest rates or exchange rates would have to be used to influence domestic activity. In particular, fiscal policy would bear the burden of controlling aggregate demand, and to a lesser extent quantitative credit controls (for example, loan-to-deposit ratios) and tighter prudential regulations would need to be used to curb credit expansion. The peg also means that GCC countries cannot defend against imported inflation, although in the long run, higher inflation in trading partners would be offset by depreciation of their currencies against the US dollar. Furthermore, the peg forces adjustment of the real exchange rate to a new equilibrium to go through prices rather than the nominal exchange rate. Adjustment through prices is slower than through the exchange rate and may trigger price-wage spirals, generate low real interest rates, and increase the risk of asset bubbles as investors move into real estate and equity markets.²⁵

Even if pegging is an appropriate choice for GCC countries, pegging to the US dollar is not the only option. Adopting a basket peg may be a useful way to introduce some flexibility in the exchange rate. The example of Kuwait is a case in point. In May 2007 Kuwait abandoned the peg to the US dollar in favor of a peg to a currency basket, reverting to the exchange rate system that existed prior to January 2003.²⁶ With a basket peg, the main anchor properties of an exchange rate peg could be retained but at the same time gaining some adaptability to the adverse swings among the values of the major reserve currencies. For example, with oil priced in US dollars, volatility in the price of oil is reflected, under a dollar peg, directly in volatility in oil export receipts. Under, say, an SDR peg the volatility of oil export receipts would have been much less in the past few years.

pegging the currency to the export price of the main export commodity for small open economies that are relatively specialized in the production and export of a particular mineral or agricultural commodity.

23. Setser (2007) has made this argument. But this can happen with a basket peg as well. For example, in the case of an SDR peg, the monetary policy needs of the GCC may be different from the monetary policy stances of the United States, Europe, and Japan.

24. For example, US monetary policy of low interest rates in 2007–08 was at odds with the booming GCC economies, as was the US policy of high interest rates in the late 1990s when oil prices and growth in the GCC were low.

25. Such bubbles have been evident in all the GCC countries over the past few years.

26. While the basket is undisclosed, the currency weights in the new basket were initially estimated to be: 50 percent US dollar, 40 percent euro, and 10 percent pound sterling. It appears now that the weight of the US dollar is much higher in the basket.

The volatility of the nominal effective rate would be reduced, benefiting foreign trade, investment, and balance sheet stability. In the short run, a basket peg can help contain imported inflation by shielding the currency against cross-rate movements among the major currencies.

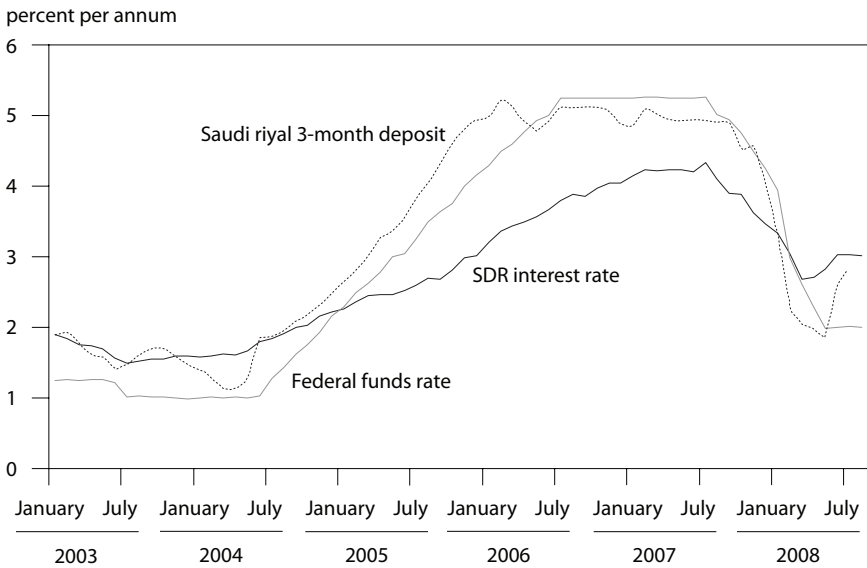
But at the same time, basket pegs reduce the informational benefits of maintaining constant one bilateral exchange rate relevant for price comparisons and economic transactions. Also, they are less transparent and more difficult to explain to the public. And they tend to be less credible than single-currency pegs, especially if the currency weights are not known or are changed over time.²⁷ A failure to disclose the relative weights and composition of the currencies used in the basket could complicate the assessment of exchange rate risk and lead to undesirable consequences. In Kuwait, for example, the basket was undisclosed and its adoption led to a strong demand for the dinar, large capital inflows, and an increase in liquidity. This speculation complicated monetary policy management rather than simplifying it as was hoped.

More generally, pegging to a basket of currencies does not buy a country monetary independence. Under capital convertibility, interest rates would likewise have to follow a “basket” of interest rates. This will reduce somewhat the problems arising from extreme desynchronization between the monetary policy needs in the GCC and the United States, but in quantitative terms the gain is not likely to be that much. Take, for example, the case of Saudi Arabia illustrated in figure 3.14. Suppose that instead of being pegged to the US dollar, the Saudi riyal had been pegged to the SDR and the domestic interest rate had mirrored the SDR interest rate. During 2006, the Saudi rate would have been about 100 to 150 basis points lower and in 2008, about 50 to 100 basis points higher. Whether such small changes would have a significant impact on aggregate demand and inflation is questionable.

Under a basket regime, the central bank would have to actively manage foreign exchange operations and risk. The relatively low levels of financial intermediation and lack of available financial instruments would limit the scope of these operations (Roger, Restrepo, and Garcia 2008). And pegging to a basket would not fully address the management of oil price volatility or the rise in liquidity from increases in oil prices. A basket that included the price of oil, as has sometimes been suggested, would respond to the relatively higher volatility of oil prices (by the weight given to the oil price in the basket). This could have serious adverse effects on other sectors of the economy. For example, higher oil prices would lead to a real appreciation, which would raise the cost of other exports and dampen diversification efforts—the classic “Dutch disease” problem. It is also unclear that a fall

27. The effect is minimized in the case of pegging to the SDR, where the composition and weights of the currencies that make up the basket are public knowledge. But the SDR are not particularly well understood by the general public.

Figure 3.14 Interest rates, January 2003–August 2008



Sources: International Monetary Fund, *International Financial Statistics*; Saudi Arabian Monetary Agency, Monthly Reports.

in oil prices would depreciate the currency sufficiently to accommodate the adverse terms-of-trade change and stabilize export earnings. Also, one can argue that oil itself is an international currency. So for the GCC, as a major oil-exporting bloc, pegging to the price of oil would be like pegging the nominal (fiat) currencies to their own (commodity) currency. It would obviously not anchor the GCC countries' currencies to something truly exogenous.

Looking Ahead

The euro will likely become more prominent in the MENA region as trade with Europe increases and reserves are correspondingly shifted into euro-denominated assets. However, judging by history, this process will be slow, and it is difficult to see the euro overtaking the US dollar anytime soon. In the North African countries—Morocco and Tunisia—it has, but this example is unlikely to be replicated in the region. MENA will remain for the time being largely a dollar zone. The currencies will generally remain pegged, but not necessarily just to the US dollar. While switching completely to pegging to the euro is not really in the cards, except again perhaps for isolated cases like Morocco, where the euro has an 80 percent

weight, the move to a basket in which the euro has a significant weight is a more likely possibility.

Since the GCC countries are such important players in the region, a more pertinent question is what they will or should do. If pegging is an optimal strategy for the GCC countries, especially since managed floating is neither a viable nor a desirable option, what should they peg to? As long as oil continues to be priced in US dollars, switching to a euro peg is simply not going to happen. For the time being, on balance, maintaining the dollar peg is the right exchange rate policy for the GCC countries.

What about the future, and particularly when the GCC Monetary Union is established, still slated for 2010? What should be the exchange regime for the single currency? GCC governments have stated often that they intend to stay with the US dollar for now, and the choice of exchange rate arrangements under the planned monetary union has not been made. The choice comes down basically to keeping the dollar peg regime, perhaps with a change in parity if necessary, or pegging to a basket in which the US dollar would have a relatively high weight, followed by the euro.²⁸

The familiarity of GCC governments, central banks, and private economic agents with the US dollar peg, as well as the preference of the GCC countries to date for a fixed exchange rate, argue in favor of maintaining the current arrangement even after the monetary union comes into being. In fact, in 2003 GCC member countries opted to fix their bilateral parities and to peg their currencies to the US dollar in the run-up to the GCC Monetary Union in 2010 precisely to benefit from the greater certainty about the parities at which they would enter the monetary union. Keeping the single GCC currency pegged to the US dollar for some time would leave the public and policymakers on already very familiar ground.

On the other hand, with increasing integration in international trade, services, and asset markets, the GCC countries can be more prone to external shocks, and a higher degree of exchange rate flexibility may become more desirable in the medium term to ensure external stability and international competitiveness. In particular, as oil reserves are depleted in some member countries, such as Bahrain and Oman, and the nonoil tradable sectors expand, the private sector will need to be competitive to function as the main source of employment opportunities for the rapidly growing national labor forces. Furthermore, policies aimed at increasing participation rates by nationals in GCC labor markets will erode over time the partial insulation flexible labor markets have provided to the peg regime.

All in all, there are strong arguments in favor of the GCC countries retaining the fixed exchange rate regime. The dollar peg seems to be the best option leading up to, and also in the short run after, the establishment

28. For an extensive discussion of the choice of exchange rate regime for the GCC Monetary Union, see IMF (2008).

of the monetary union. In the future, flexibility could be introduced by implementing a basket peg, following the example of Kuwait and other major oil exporters like Algeria and Libya. While capable of dampening volatility from swings among the major currencies, and avoiding monetary policy from being tied exclusively to the United States, a basket peg would not eliminate the effects of imported inflation nor would it allow the GCC countries to operate an independent monetary policy.

If a basket peg regime is chosen, what should the basket look like? Pegging to the SDR is one option. Another option could be a basket consisting only of the US dollar and the euro. Such a basket has many advantages. First, it would be simple to interpret. Second, it would cover the bulk of transactions in goods, services, and financial instruments (now in the dollar and euro area). Third, it would reduce monetary dependence of the GCC on the US Federal Reserve. And finally, it would allow for the use of dollar or euro hedging instruments to efficiently manage financial risks. A move to such a basket would help ensure the role of the euro as it would encourage trade and financial flows between the GCC and Europe.

To sum up:

- MENA and the GCC are dollar zones; while the use of the euro is growing, it is not yet posing any competition to the US dollar.
- GCC countries should remain pegged to the US dollar for now and even after adopting a single currency following the establishment of the GCC Monetary Union in 2010.
- If increased flexibility of the exchange rate turns out to be necessary or desirable in the future, pegging to a basket is more appropriate than managed floating.
- A basket consisting of the US dollar and the euro, with publicly announced weights, would be a good option since it would be relevant for most trade and financial transactions; using such a basket would undoubtedly enhance the role of the euro in the Middle East region.

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Latin America

MARIA CELINA ARRAES

Over the first ten years of its existence, the euro has proved to be more than a powerful symbol of collective identity. It has proven its global importance both as a medium of exchange and as a store of value. However, its importance as a unit of account and as an anchor for pegging local currencies is yet to be established. The emergence of an internationally used currency is a very slow process. During the last decade, the euro's international role has grown gradually but steadily, which is related to the central role of the euro area in the global economy and international trade.

In fact, the euro meets a number of criteria to function as a key international currency, including its use in one of the world's largest economic entities, supported by a monetary authority committed to price stability and the emergence of euro-denominated financial instruments. According to the European Central Bank (ECB 2008), the most prominent driver of the international role of the euro remains the geographical, economic, financial, and institutional proximity to the euro area.

The euro has become the second most important international currency after the US dollar if global foreign exchange markets are included. According to the ECB, the share of the euro in international loans and deposits, merchandise trade, and global foreign exchange markets is very significant. In addition, the share of the euro in bond issuing and its use in international reserves is just as impressive. The euro accounted for 26.5 percent of the global official reserves in 2007, according to International Monetary Fund (IMF) data. Another example of the euro as an interna-

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tional currency is the fact that, according to the Bank for International Settlements, banks have been significantly increasing their issuance of euro-denominated debt.

In Latin America, the use of the euro is growing despite inertia and the dollar's incumbency advantages. Moreover, the main variables that determine the international use of a currency—economic size, significance of foreign trade flows, financial-market development, and the degree of price and exchange rate stability—indicate that the euro has potential to become more prominent as an international currency used by Latin American countries.

Euro's Role in Latin American Trade and Investment

From a regional perspective, the US dollar is the most used reference currency. Nevertheless, the growing weight of economic and commercial ties between Latin America and Europe is having a direct impact on the use of the euro, as well as on the overall economic performance of the region.

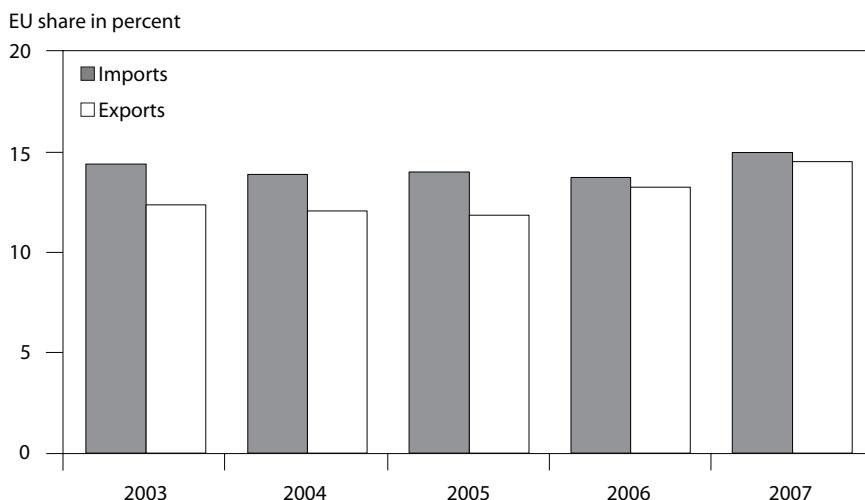
Although the United States is still the region's major commercial partner, Latin American countries are strengthening their ties with other regions, including the European Union. The euro area is an important commercial partner of Latin America and an important source of borrowing and foreign direct investment (FDI) in the region.

The role of the euro as a price-setting and invoicing currency in Latin America depends on international practices for invoicing and settlement of foreign trade. Commodities are traded mainly in US dollars. Change will be slow due to the high degree of standardization of the markets. For noncommodity exports, the level of competition in the market for a product should be taken into account. Nevertheless, as trade between Europe and Latin America grows, so will the use of the euro in trade invoicing and settlement.

Latin America's imports from the European Union increased from 45 billion euros in 2003 to 78 billion euros in 2007. Exports to the European Union continue to climb, rising from 40 billion euros in 2003 to 80 billion euros in 2007. Figure 3.15 shows EU shares in percent.

Among selected Latin American countries, the average share of trade flow with the euro area is about 13 percent of the total flow. If one excludes Mexico, this share goes up to 18 percent (table 3.9). Brazil is the major commercial partner of the euro area, being the biggest importer in relative terms and the second-largest exporter after Chile. Mexico directs a comparatively small part of its exports to euro area countries. While the share of euro area imports is higher in the bigger Latin American economies, the share of exports to euro area countries is higher in the smaller economies. These figures show there is room for improvement in the trade relationship.

Figure 3.15 Latin American trade with the European Union, 2003–07



Source: International Monetary Fund, *Direction of Trade Statistics*.

Table 3.9 Selected Latin American countries' merchandise trade with the eurozone, 2007 (percent share)

Country	Exports	Imports	Trade flow
Brazil	19.8	20.1	19.9
Argentina	15.4	17.5	16.3
Uruguay	16.6	11.5	13.5
Mexico	4.9	10.3	7.6
Chile	21.0	11.3	17.2
Peru	15.2	9.4	12.8
Subtotal	12.8	13.5	13.1
Subtotal (excluding Mexico)	18.8	16.9	18.0
Eurozone in world merchandise trade ^a	28.3	27.2	27.8

a. 2006 World Trade Organization data. Includes intra-area trade.

Source: International Monetary Fund, *Direction of Trade Statistics*.

According to the latest data from the Economic Commission for Latin America and the Caribbean (ECLAC 2008), in 2007 global FDI flows reached US\$1.8 trillion, with Latin America and the Caribbean receiving 7 percent of these global flows. Latin America's largest FDI recipients in 2007 were Brazil, which received US\$34.5 billion, Mexico (US\$23.2 billion), and Chile (US\$14.4 billion).

Table 3.10 EU outward and inward foreign direct investment, by geographic region, 2006

Region	Outward flows		Inward flows	
	Billions of euros	Percent	Billions of euros	Percent
Extra-European Union	260.2	100.0	157.1	100.0
Europe	66.8	25.7	25.8	16.4
Africa	11.8	4.5	1.9	1.2
North America	102.5	39.4	82.7	52.6
Asia	30.6	11.8	29.5	18.8
Oceania	7.6	2.9	4.5	2.9
Central and South America	39.5	15.2	19.7	12.5

Source: European Commission, Eurostat Database.

The euro area has been a very important source of borrowing and FDI to Latin American countries. For these countries, there is a clear benefit from access to EU markets and from EU investments. Closer ties with the European Union are beneficial because they are a useful diversification. Many European companies operate either on their own or in joint ventures in Latin America. In particular, the presence of European banks in the region has increased considerably.

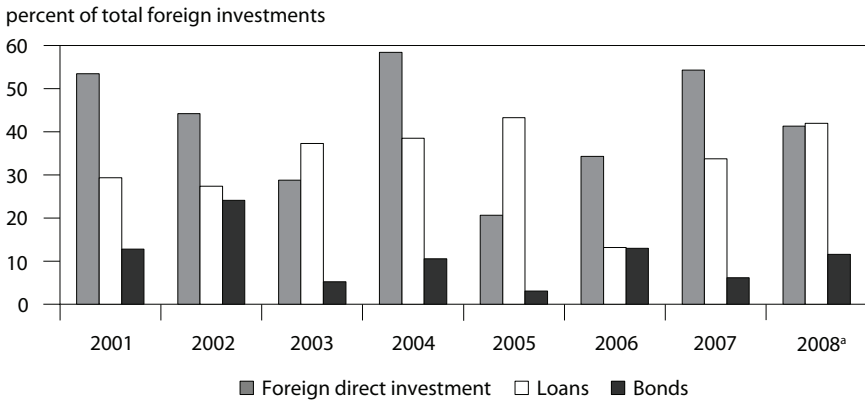
According to the latest data from the European Commission (2008), EU outward FDI stocks increased over the 2002–06 period by 42 percent and by 11 percent between 2005 and 2006. The geographical distribution of EU FDI outflows in 2006 also shows the American continent as the main destination with a share of 55 percent.

EU FDI outflows to Latin America averaged 12 billion euros during the 2002–06 period. The year 2004 saw a surge in EU FDI flows to Latin America, reaching an unprecedented level of 20 billion euros, but then falling to 12 billion euros in 2005 and 2006.

In the last decades, the outward investment flows generated by Latin American firms have increased as a result of their intensified international expansion efforts. Direct investment from the South and Central American countries in the European Union accounted for 12.5 percent of the global investment there in 2006 (table 3.10).

From 2001 to 2008, euro area countries were the source of an average of 21.5 percent of total external borrowing and about 44.6 percent of FDI inflows to Brazil (figure 3.16). However, the share of Brazilian FDI directed to the euro area is small, well below the share of other important areas. From 2007 to July 2008, Brazil's direct investment in the euro area reached 7.7 percent of total Brazilian direct investment abroad, approximately half of the Latin American average of 15 percent.

Figure 3.16 Euro area countries' investments in Brazil, by category, 2001–08



a. January to July.

Source: Banco Central do Brasil.

Euro in Latin American External Assets and Liabilities

With respect to the euro's share in international debt markets, net issuance of euro-denominated debt securities, according to the narrow measure, increased from the equivalent of US\$261.8 billion in 2004 to US\$340 billion in 2007, based on data from the ECB (2008). In the third quarter of 2008, net issuance of euro-denominated bonds and notes reached US\$464 billion.

It is well known that countries have to decide their own levels, composition, and maturity structure of foreign debt. In general, the currency composition of foreign debt should be related to the composition of earnings from foreign trade. Agnes Bénassy-Quéré, Lionel Fontagne, and Amina Lahreche-Revil (1999) argue that the question that should be asked is what would be the optimum anchor basket that would make it possible to minimize the losses arising from fluctuations between international currencies, given a geographic structure of foreign trade and a borrowing structure inherited from past decisions. Thus, as trade between Europe and Latin America grows, euro-denominated debt may account for a larger share of Latin America's total foreign debt. Table 3.11 shows current share of euro-denominated debt in selected Latin American countries.

In recent years, the amount of international bond issues in Latin America has increased. However, the average size of euro-denominated issues is still smaller than that of US dollar-denominated issues. Nonetheless, the share of euro-denominated issues in total sovereign external bonds is significant, with Argentina and Mexico representing the highest shares among selected countries (table 3.12).

Table 3.11 Euro-denominated external debt in selected Latin American countries

Country	Classification	Period	Percent share of total debt
Brazil	Total	2007	6.1
Argentina	Public	2008Q2	10.6
Uruguay	Total	2007	5.2
Peru	Public	2008Q2	12.9
Chile	Total	2006	3.6

Note: Total debt according to classification.

Sources: Central banks of Brazil, Uruguay, Argentina, and Chile; Ministry of Economy and Finance of Peru.

Table 3.12 Sovereign euro-denominated bonds, September 2008
(percent of total sovereign external bonds)

Country	Share
Brazil	14.0
Argentina	28.4
Uruguay	6.1
Mexico	18.4
Peru	15.5

Note: Sovereign external bonds face value.

Source: Bloomberg.

The external debt of Latin American countries is issued mainly in the US dollar. These countries are little exposed to the euro, as less than 10 percent of the regional debt on average is denominated in euros. However, the share of the euro in the structure of external bonds may increase with more international borrowing instruments denominated in euros.

On the asset side, the currency composition of foreign exchange reserves depends on several factors such as market liquidity, country's exchange rate regime, diversification strategies, and matching trade partners. Exchange rate volatility could lead as well to portfolio shifts both into and out of a currency. The policies and credibility of the ECB have an important influence on the euro's international value and its use in international price setting and as anchor for monetary and exchange rate policies.

A recent ECB study and data from the IMF suggest that the share of the euro in global foreign exchange reserves has reached 26.5 percent (table 3.13). The share has gradually increased over the years but recently stabilized.

The magnitude of the euro's use as a reserve of value currency by

Table 3.13 Official foreign exchange reserves in euros

Country/grouping	Percent of total reserves
All countries, 2007	26.5
Developing countries, 2007	28.4
Selected Latin American countries, 2006 ^a	
Chile	24.7
Peru	17.8
Uruguay	1.3

a. Data reported by countries' authorities.

Sources: International Monetary Fund; European Central Bank for selected countries.

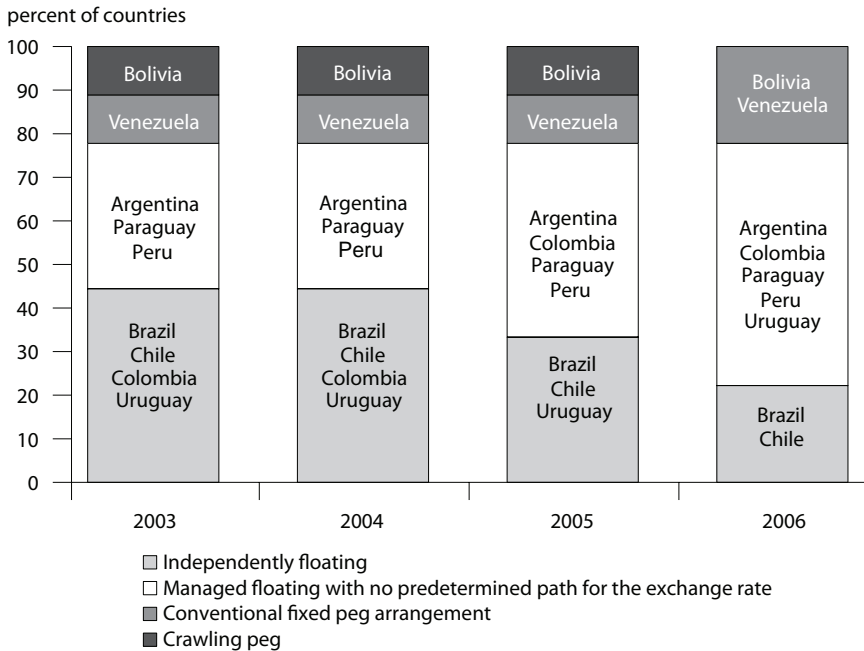
Latin American countries is not so clear. According to the ECB, developing countries have relatively more international reserves in euros than the global average, but the overall composition of Latin American countries' reserves remains largely unknown. Only three countries in the region make public the currency allocation of their international reserves: Chile, Peru, and Uruguay. Chile's case is worth noticing since almost one-quarter of its reserves is invested in euro-denominated assets. In July 2008, the Brazilian government introduced a bill in congress proposing the creation of a sovereign wealth fund. The proposal's two main features are funding by budget resources (not involving use of international reserves under Banco Central do Brasil management) and investing in both external and internal financial assets. The fund when implemented will probably have different benchmarks from those of international reserves. On currency composition, a new scenario should arise in the Brazilian case for international sovereign assets as a whole, favoring the euro.

Euro as a Peg

The US dollar still keeps its place as the world's preferred currency for pegging and exchange rate arrangements. This is mostly because the use of a currency as anchor is linked with issues such as trade and financial integration level. Most of the countries that have some arrangement with the euro also have historical or geographical relationships with the euro area. In this sense, no Latin American economies currently have any kind of exchange rate arrangements using the euro as a peg (figure 3.17).

The choice of the exchange rate regime is very important for the monetary policy of a country. It involves the implementation and monitoring of instruments to maintain the stability of the currency value and, simultaneously, keep enough flexibility in order to absorb external shocks. Nowadays, many factors contribute to the search for alternatives for exchange rate regimes, notably larger financial-market integration and growth of

Figure 3.17 Exchange rate regimes in selected Latin American countries, 2003–06



Source: International Monetary Fund.

international trade. One of the alternatives is monetary integration, and the symbol of this mechanism is the European continent’s adoption of a single currency.

Conclusion

Despite the increase in trade and financial linkages between Latin America and the euro area during the last decade, Latin America’s strongest relationship is still with the US dollar. It is also important to note that in the past decade new players have emerged in the global economy. Thus, these linkages have diversified as a result of the growing importance of trade between Latin America and Asia and of national policies favoring intraregional trade agreements.

The rise of the euro is a unique, outstanding event and is an unparalleled model for Latin American countries’ monetary integration ambitions. The European Payments Union inspired the creation in the 1960s of the Convênio de Pagamentos e Créditos Recíprocos (CCR), a regional payments system with multilateral settlement in South America under

the aegis of the Latin American Integration Association. More recently, the central banks of Argentina and Brazil put in place on October 3, 2008, the Payment System on Local Currency (SML). This system allows the invoicing and settlement of exports by each country in its own currency. Both systems can continue to benefit from European lessons on monetary integration.

On interregional cooperation, the Strategic Partnership between the European Union and Brazil is an example of how the two continents can work together. The partnership was established at the first EU-Brazil Summit in July 2007. It constitutes a political commitment of the European Union and Brazil to engage in political, regional, economic, and social developments. The next step toward improved commercial and financial ties clearly seems to be to close an agreement between the European Union and the Mercosur already under discussion.

Given the current economic scenario, the dollar's dominance does not seem to be threatened, but there is room for a larger role for the euro as now it does not reflect the strength of the economic ties between the two regions. In this sense, the performance of the European economy will be a key factor.

In a nutshell, the Latin American commercial and financial relationship with euro area countries seems to be much more significant than the relationship with the euro itself. The euro is an alternative currency for Latin America and is both instrumental and essential to increase investment flows to the region. The importance of the euro for Latin America will depend on the intensification of trade and financial links between Latin America and the euro area and on the global economic structure that will emerge after the current global financial crisis is resolved.

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Market View

THOMAS MAYER

During the 10 years of its existence, the euro has turned into a resounding success. Price stability, defined by the European Central Bank (ECB) as inflation of “less than but close to 2 percent” over the medium term, was largely maintained, and increasing financial integration promoted economic integration and supported economic growth. Between 1999 and 2008, euro area GDP growth averaged a little more than 2 percent per year compared with just about 1¾ percent in 1992–98. Success at home was accompanied by success abroad. Over the years, the euro has gained in importance in international securities markets and as an international reserve currency. Somewhat surprisingly, the present financial crisis seems to have even added to the attractiveness of the euro as many countries have come to see the Economic and Monetary Union (EMU) as a shield against the economic damage caused by the plunge in confidence in stand-alone financial systems and currencies of smaller countries. Thus, several EU accession countries have raised early EMU entry in their list of economic policy priorities, and previously EMU-skeptical long-time EU member countries, such as Denmark and Sweden, appear to be warming up to the euro.

However, it would be misleading to simply extrapolate into the future the success of the euro during its first decade. Looking ahead, the euro is likely to face at least two important challenges: real economic adjustment within the euro area and maintenance of fiscal and financial stability without a central fiscal authority. Hence, while the euro enjoyed a

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happy childhood during the last 10 years, it may well turn into a troubled teenager, suffering from considerable stress and perhaps even from existential crises.

Euro's Happy Childhood

The economic literature has identified a number of characteristics that a currency needs to play an important role at the global level.²⁹ Prominent among those features are (1) the issuing country's share in world output and trade; (2) macroeconomic and price stability in the issuing country; (3) the size, state of development, depth, and regulatory framework of financial markets there; and (4) network externalities. The euro has benefited from all these factors. As table 3.14 shows, in 2007 the euro area was the largest economy in the world after the United States (when GDP is converted into common currency using purchasing power parities); it was the largest global trader (measured as share of exports in world exports) and had lower inflation and a lower government budget deficit than the United States (indicating a high degree of macroeconomic stability). As a result of this and the increasingly heavy use of the euro in neighboring countries, users of the European common currency seem to benefit from substantial positive network externalities (although the US dollar is still likely to offer even more of these externalities given its greater use in Asia and Latin America).

Reflecting the economic size of the euro area, deepening European financial integration, and the heavy use of the euro internationally, the sizes of euro-denominated money market instruments, securities, and cross-border bank liabilities all have increased significantly and even overtaken the respective sizes of US dollar instruments since the introduction of the common European currency (figures 3.18 to 3.20).

Moreover, the euro also gained in attractiveness as a store of value for official international reserve holders. However, as figures 3.21 and 3.22 show, despite the rise of the euro in the portfolios of both industrial- and developing-country central banks, the US dollar's dominant position as the preeminent international official reserve currency has so far remained unchallenged. Similarly, the US dollar has remained the most important international medium of exchange, as evidenced by its share in the cash foreign exchange market (figure 3.23) and in foreign exchange derivatives (figure 3.24).

At the same time, however, the euro has exerted a stronger influence on other currencies than the Deutsche mark did when it was the second most important international currency. This can be seen in figure 3.25,

29. See, for instance, G. Galati and P. Woolridge, *The Euro as a Reserve Currency: A Challenge to the Pre-eminence of the US Dollar?* BIS Working Paper 218, October 2006. Basel: Bank for International Settlements.

Table 3.14 Key economic characteristics of the euro area, United States, and Japan, 2007 (percent of GDP unless otherwise indicated in parentheses)

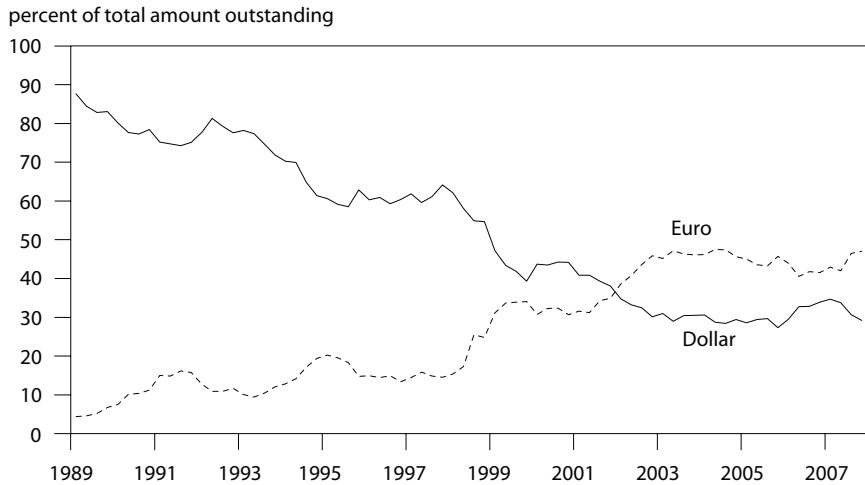
Characteristic	Euro area	United States	Japan
Population (millions)	320	302	128
GDP (percent share of world GDP, PPP)	16.1	21.4	6.6
GDP per capita (thousands of euros, PPP)	27.9	39.3	28.8
Value added by economic activity			
Agriculture, fishing, and forestry	1.9	1.1	1.4
Industry (including construction)	26.8	22.4	29.1
Services	71.3	76.5	69.5
Unemployment rate (percent)	7.4	4.6	3.8
Inflation (percent)	2.1	2.9	0.1
Stock market capitalization	77.0	142.0	94.0
General government			
Surplus (+) or deficit (-)	-0.6	-3	-1.4
Gross debt	66.3	49.2	159.5
Revenue	45.6	30.4	33.0
Expenditure	46.2	33.5	34.4
External (excluding intra-euro area) transactions			
Exports of goods and services	22.4	11.9	18.4
Imports of goods and services	21.2	17.0	16.5
Exports (percent share of world exports)	17.5	9.9	6.1
Current account balance	0.3	-5.3	4.8

PPP = purchasing power parity

Sources: European Commission, Eurostat Database; International Monetary Fund; Organization for Economic Cooperation and Development; Reuters; European Central Bank; national authorities.

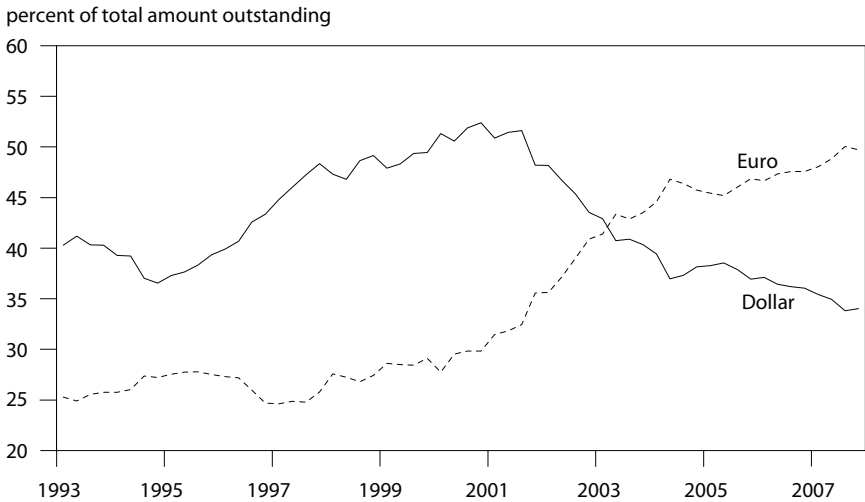
which gives the coefficients of regressions of the dollar exchange rate of a currency on the dollar-mark and dollar-euro exchange rates, respectively, before and after the introduction of the euro. A coefficient of one indicates that the respective currency moves entirely with the Deutsche mark or euro while a coefficient of zero suggests that the currency moves completely independently from the exchange rate of the Deutsche mark or the euro. The figure plots the coefficients of the regressions for the Deutsche mark on the horizontal axis and those of the regressions for the euro on the vertical axis. Points in the diagram that lie exactly on the 45 degree line imply that there was no change in the coefficients from the period before to that after the introduction of the euro. Most coefficients moved north of the 45 degree line, suggesting that regression coefficients—and hence the euro’s influence on exchange rate movements of these currencies against the US dollar—increased with the introduction of the common European currency.

Figure 3.18 Euro-denominated money market instruments overtaking US dollar market, 1989–2007



Note: Pre-1999 data are for Deutsche mark.

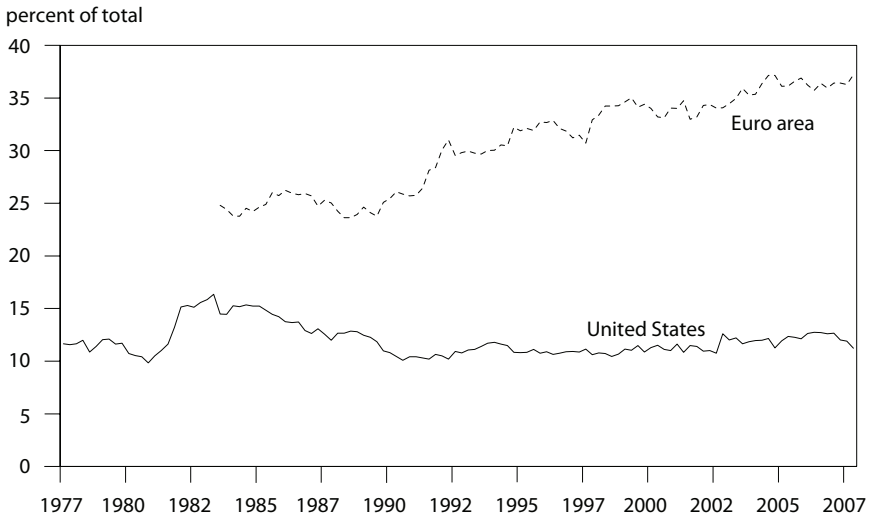
Figure 3.19 Euro debt securities markets overtaking US dollar market, 1993–2007



Note: Pre-1999 data are for Deutsche mark.

Source: Bank for International Settlements.

Figure 3.20 European euro area banks attract more international business, 1977–2007



Source: Bank for International Settlements.

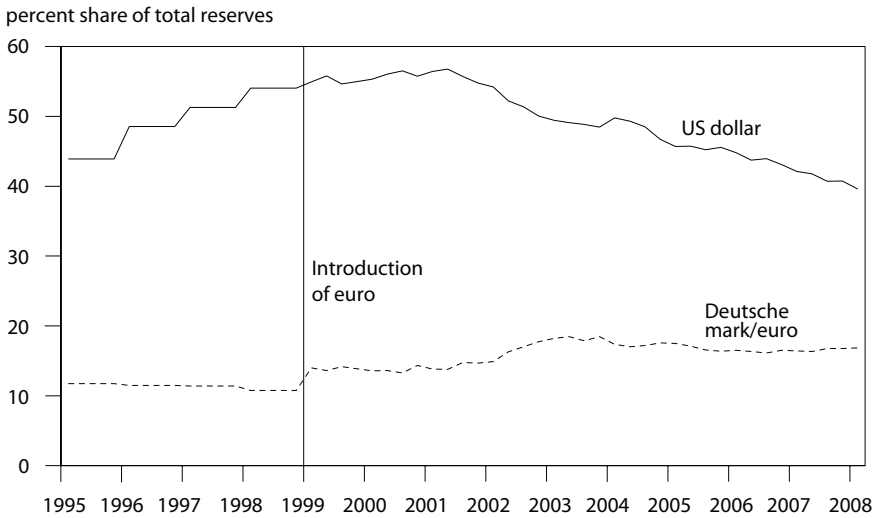
Euro Weathers the Financial Crisis

Skeptics have argued that the lack of a strong political component in the EMU would prevent effective supervision and regulation of the euro area financial sector and make the sharing of the costs from financial crises difficult if not impossible. Hence, financial stability has been seen at severe risk in the euro area during financial crises. However, the events so far during the present financial crisis have proven the skeptics wrong.

At the national level, regulation and supervision of the financial sector in euro area countries were found to have been no worse than in other key countries, including the United States, and in some cases much better (e.g., Spain, where the central bank helped to prevent murky practices of putting business off-balance sheet and forced banks to build their reserves anticyclically). Moreover, governments have shown that they were able to handle failures of banks with large cross-border activities. Perhaps more importantly, euro area (and EU) governments quickly found a common approach to dealing with the banking crisis (giving guarantees for bank debt and providing funds for the recapitalization of banks), even though schemes were implemented on a national level. The ECB and the European Commission have played an important role in bringing governments together in a cooperative approach to resolve the crisis.

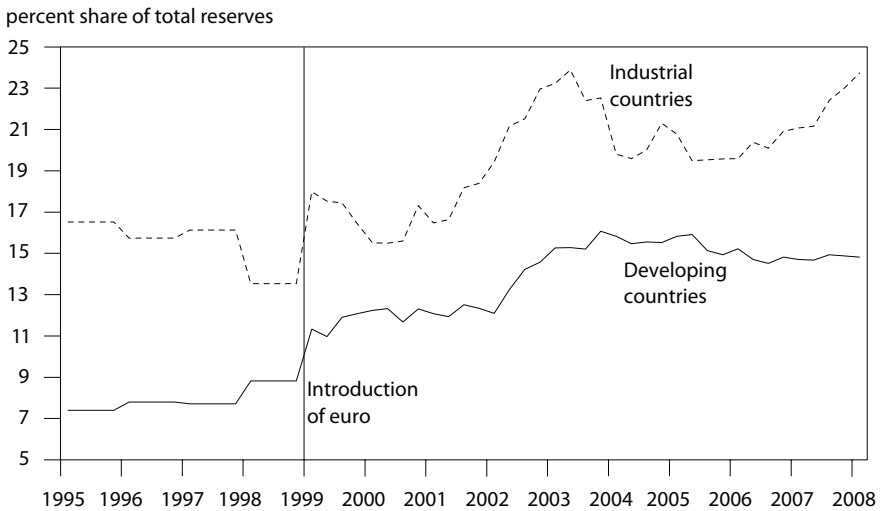
Given its role as the second most important international currency, the

Figure 3.21 Euro gaining moderately as official reserve currency, 1995–2008



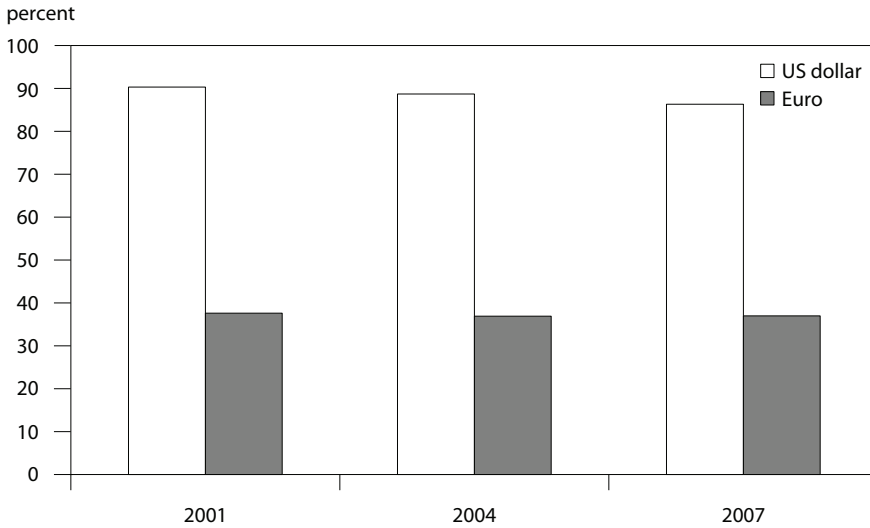
Source: International Monetary Fund, Currency Composition of Official Foreign Exchange Reserves (COFER) Database.

Figure 3.22 Euro gaining as official reserve currency in both industrial and developing countries, 1995–2008



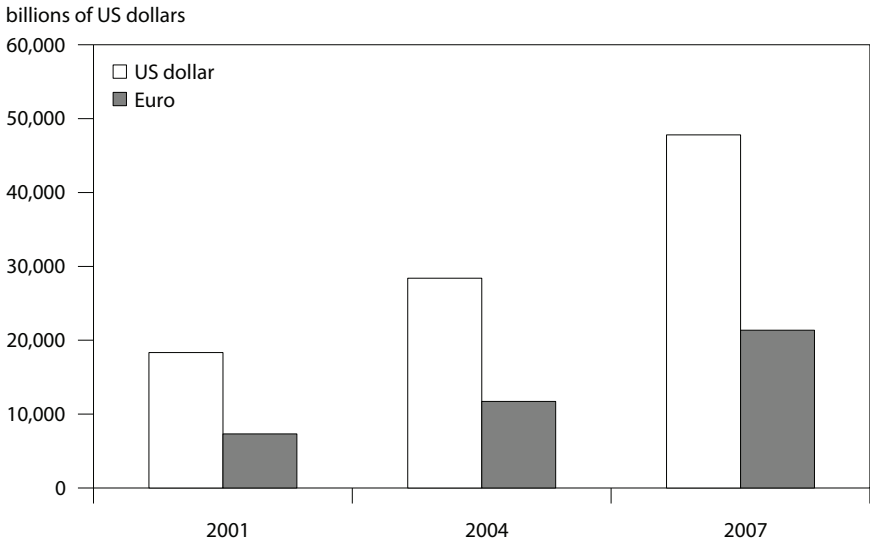
Source: International Monetary Fund, Currency Composition of Official Foreign Exchange Reserves (COFER) Database.

Figure 3.23 US dollar maintaining its lead in foreign exchange markets



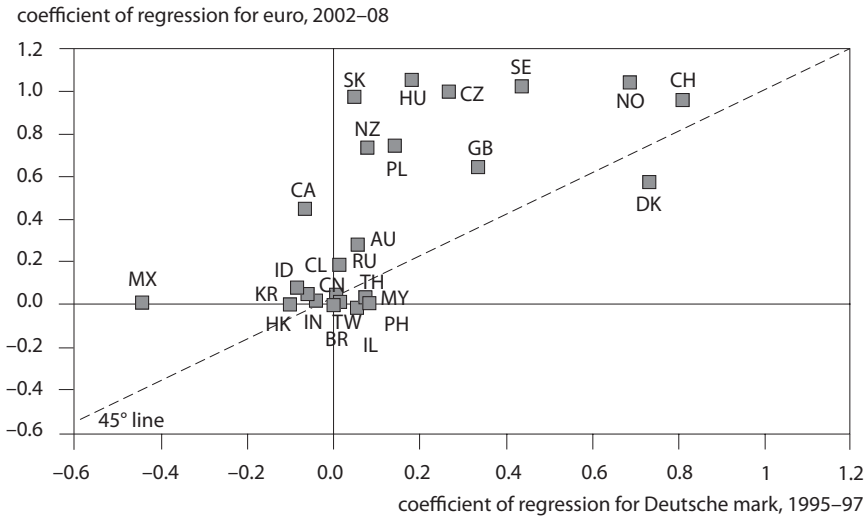
Source: Bank for International Settlements.

Figure 3.24 US dollar maintaining its lead in foreign exchange derivatives markets



Source: Bank for International Settlements.

Figure 3.25 Euro exerting a stronger influence on exchange rates than Deutsche mark did



AU = Australia; BR = Brazil; CA = Canada; CH = Switzerland; CL = Chile; CN = China; CZ = Czech Republic; DK = Denmark; GB = United Kingdom; HK = Hong Kong; HU = Hungary; ID = Indonesia; IN = India; IL = Israel; KR = South Korea; MX = Mexico; MY = Malaysia; NO = Norway; NZ = New Zealand; PH = Philippines; PL = Poland; RU = Russia; SE = Sweden; SK = Slovakia; TH = Thailand; TW = Taiwan

Note: Data points represent the coefficients of the regression of the dollar exchange rate of a currency on constant dollar-mark (euro) and dollar-yen exchange rates, estimated with daily data over the periods shown. Currencies above the 45 degree line respond more to the euro now than they did to the Deutsche mark in the past.

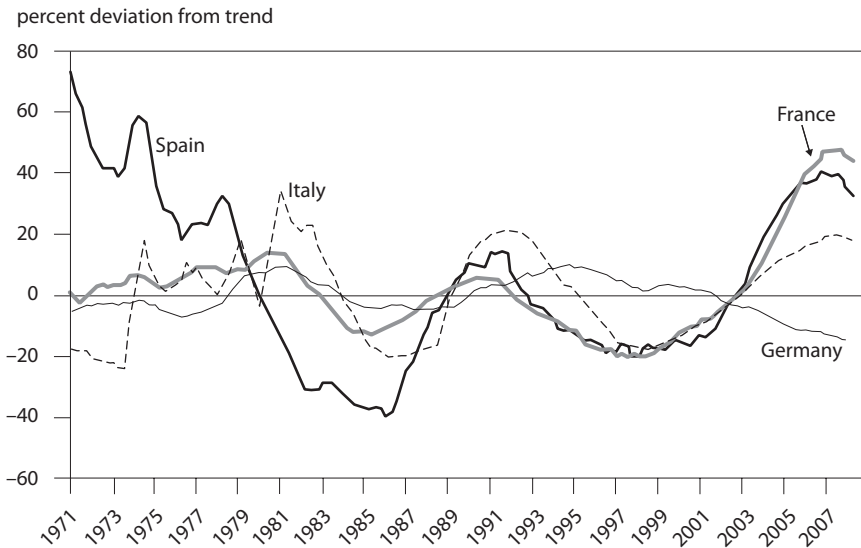
Source: Bloomberg.

euro turned into a shield especially for smaller EMU member countries against currency and capital-market turbulences triggered by the financial crisis. The relative tranquility in euro area financial markets contrasted sharply with the severe difficulties experienced by other smaller European countries, most spectacularly by Iceland, where the entire banking sector defaulted, but even by generally very stable countries, such as Denmark, which had to defend its currency through interest rate increases. Against the background of this experience, euro skeptics in several EU countries outside the EMU are having second thoughts about EMU entry, and a number of new EU member countries in Central Europe have intensified efforts to bring forward their eventual EMU membership.

Euro’s Future as a Teenager

The euro’s happy childhood between 1999 and 2009 is likely to be followed by a much more difficult period as a teenager. In fact, as in human

Figure 3.26 House prices in key EMU member countries (deviations of inflation-adjusted prices from their long-term trend), 1971–2007

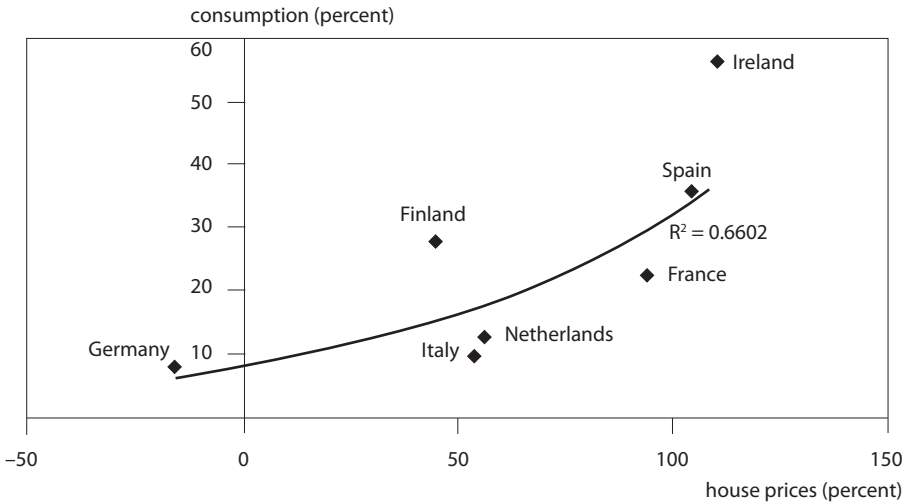


Source: Organization for Economic Cooperation and Development.

life, existential crises during this phase cannot be excluded. Key challenges for the euro include real economic adjustment within the euro area and the maintenance of fiscal and financial stability without a central fiscal authority.

In the first decade of its existence, the euro area benefited from low inflation and falling interest rates, first as a result of the convergence of national rates to the low level of Germany and then on the back of global rate reductions in the wake of the bursting of the dotcom bubble. The low level of interest rates stimulated demand financed by credit. As a result, real estate prices, construction investment, and private household consumption grew strongly, especially in those countries where interest rates reached lows never seen before. Divergence in house price developments played an important role in divergence in economic growth. As figure 3.26 shows, house prices in all major countries except Germany (and all smaller countries) rose substantially in real terms during the first 10 years of the EMU. Against this, prices stayed weak in Germany after the bursting of the unification house price bubble in the mid-1990s. The difference in house price developments exerted a significant influence on domestic demand growth. This is illustrated in figure 3.27, which plots real house price changes in a number of euro area countries between 1998 and 2006 against real consumption growth during this period.

Figure 3.27 Real house price and consumption growth across selected EMU countries, 1998–2006



Source: Organization for Economic Cooperation and Development.

An unhealthy “division of labor” developed, where some EMU countries borrowed heavily to consume and invest while a few others, notably Germany, produced to satisfy the foreign demand. Thus, the international current account imbalances that developed during the last decade at the global level were mirrored by similar imbalances within the EMU. In 2007 Germany recorded a current account surplus of 7.6 percent of GDP, or 183 billion euros (figure 3.28). With the euro area running a surplus of 36 billion euros, this implies an aggregate deficit of other EMU member countries of 147 billion euros, or 2.3 percent of GDP. Within this group, some countries had very large and unsustainable deficits (notably Greece with 14.1 percent of GDP, Spain with 10.1 percent, Portugal with 9.8 percent, and Ireland with 5 percent).

Reflecting divergent developments of domestic demand through the first decade of the EMU, large differences in unit labor cost—and hence relative external competitiveness—developed. By the third quarter of 2008 unit labor costs in Germany and France stood at about 13 and 11 percent, respectively, below their levels at the beginning of the EMU. Against this, unit labor costs in Spain and Italy stood at 44 and 23 percent, respectively, above the starting levels (figure 3.29).

As risk aversion in financial markets increased in the course of the credit crisis, sovereign credit spreads of EMU deficit countries widened relative to Germany, making the funding of large current account positions ever more costly and difficult (figure 3.30). Clearly, deficit countries

Figure 3.28 Current account balances of key EMU countries, 1995–2008

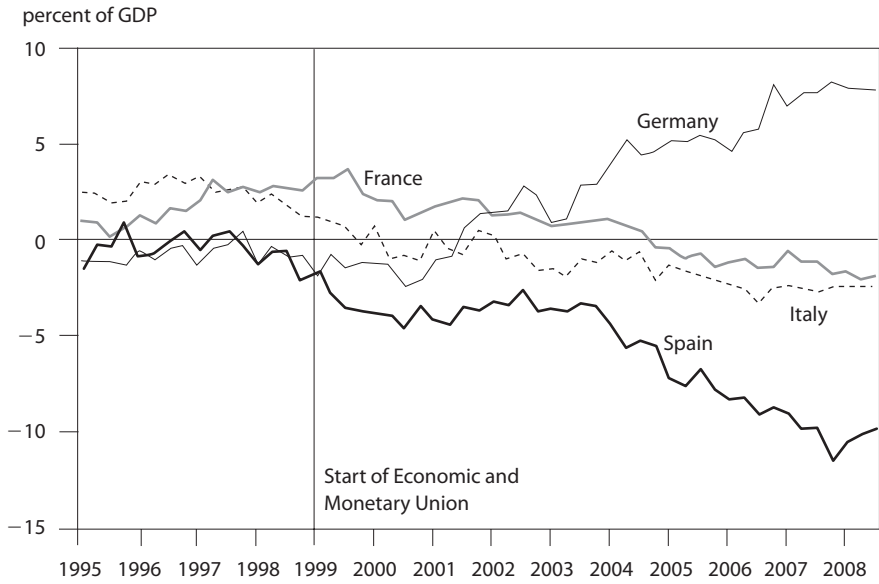


Figure 3.29 Unit labor costs in key EMU countries, 1995–2008

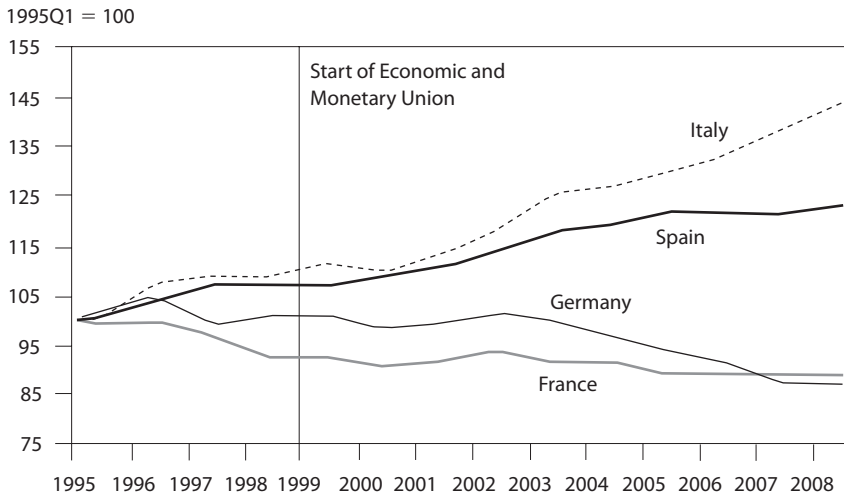
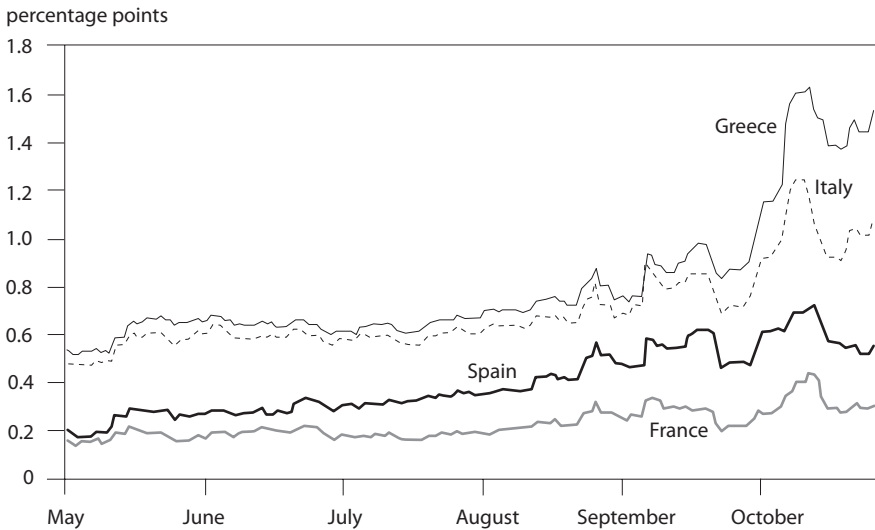


Figure 3.30 Interest rate spreads of 10-year government debt over Germany, 2008



Source: Bloomberg.

need to bring their current account balances to more sustainable levels to avoid excessive risk premia on both public and private debt or even funding crises. This requires both reducing domestic expenditure and allocating resources from the nontraded to the traded goods sector.

The downturn in housing markets in Spain, Greece, Ireland, and several other EMU member countries with large current account deficits will certainly dampen domestic demand growth. However, in order to avoid an excessive increase in unemployment due to layoffs in the nontraded goods sector, competitiveness of the traded goods sector needs to increase. Without the ability to devalue the exchange rate, this has to be achieved by nominal cost reduction.

After having joined the EMU at a relatively high real exchange rate, Germany managed to do just this during the first decade of the currency union (see figure 3.29). But whether the countries presently suffering from a lack of competitiveness are able to follow the German example is an open question. Before the EMU, these countries normally recouped lost competitiveness through nominal exchange rate devaluations. It will require a profound institutional and cultural change to enable them to bring their relative costs down without the help of devaluations. Moreover, to allow them to adjust successfully, the surplus countries, and notably Germany, have to be prepared to let their costs and prices rise at a faster pace. The more sticky cost and price inflation in the deficit country is,

the higher the cost and price inflation required in the surplus countries to make adjustment possible. But deflationary pressures in deficit countries and inflationary pressures in surplus countries may cause popular dissatisfaction with the workings of the EMU in both country groups. Although a break-up of the EMU remains very unlikely, given the huge political costs of such an event, political tensions among EMU member governments and between governments and the ECB are likely to rise as all parties involved struggle to find a feasible adjustment path to more sustainable internal current account balances.³⁰

The other challenge for the euro in coming years is maintaining fiscal and financial stability without a central government authority. Before the EMU, many economists—including some who later held senior positions at the ECB—argued that a monetary union without a political union is a risky undertaking. How could fiscal policy discipline be maintained and financial stability ensured when there was no central government authority supporting the central bank's stability policy in a consistent way? The Stability and Growth Pact (SGP)—an agreement establishing constraints for government budget deficits and debt—was developed to give part of the answer. The other part relating to financial stability was given in the course of the financial crisis in the form of close and successful cooperation of national governments in crisis management. Yet, despite these efforts, questions on how to secure fiscal and financial stability on a lasting basis remain.

The present recession is testing governments' resolve to respect the (already mellowed) rules of the SGP. According to this pact, only countries with sufficient room for fiscal policy maneuver ought to take fiscal policy measures to support growth. However, pressure on the rules of the pact is mounting. Germany, a country with fairly sound government finances, a large current account surplus, and therefore some room for fiscal policy maneuver, has shown limited appetite for a fiscal stimulus to boost growth. In the view of German authorities, the additional debt incurred as a result of fiscal expansion will fall on future German taxpayers, while other EMU members, due to significant spillover effects of a fiscal expansion in Germany, would benefit from it. Without a major German fiscal impulse they could benefit from, other countries with much less solid public

30. Scenarios for a breakup of the EMU, which were popular in the first few years of the euro's existence, have made a comeback with the financial crisis. Suffice it to say that leaving the EMU is a bad option for a country seeking a weaker currency to boost growth in the short term. Its debt would be denominated in an appreciating foreign currency, and it would be entirely at the mercy of international capital markets, which would probably impose a hefty default premium on this debt. Things would be easier if a country wanting a stronger currency left the EMU: Its debt would be denominated in a falling foreign currency. However, the exchange rate appreciation would pose a serious threat to its competitiveness and growth. This and the political costs of leaving the EMU would most likely be more than enough to deter any EMU participant from seriously considering exit.

finances and hence little room for fiscal policy maneuver, such as Italy, are mulling significant fiscal policy measures to support growth.

At the same time, the financial crisis has revealed some defects in the arrangements for financial stability in the EMU. Initially, banking and financial-market supervision was left in national hands. Over time, and certainly with the onset of the financial crisis, cooperation among national supervisors and between them and the European System of Central Banks intensified. The crisis management has been praised widely and indeed with some justification. But an Achilles' heel remains in the arrangements due to the lack of a central fiscal authority. To appreciate this, consider the question of how the national authorities of a smaller euro area country could cope with bank failures that exceed the authorities' capacity to mobilize funds for a public rescue. According to its statutes, the ECB must not "bail out" any EMU member government. But what if such a government would be overwhelmed by the costs of bank failures within its jurisdiction? Would the ECB accept the bonds issued by this country to support its banks as collateral when they are submitted for repurchase by the very same banks that urgently need the funds? Would other countries regard such an operation as monetization of government debt by the ECB and block the transaction, possibly causing the default of the distressed government?

A move toward joint issuance of government bonds by EMU member countries would make these questions irrelevant. Bonds issued this way would be backed by the financial standing of all EMU governments combined (and eventually, of course, also by the ECB, which is an agency of these governments), like traditional sovereign issues. Joint issuance of government debt would also establish a common sovereign euro area bond market, which many international investors in the euro would most likely find much more attractive than the present smaller national bond markets. But would countries with a high credit rating (e.g., Germany) be willing to dilute their rating by issuing debt jointly with governments with weaker ratings? This and the earlier questions reveal gaps in an EMU that is not backed by political union, gaps that may introduce a risk premium on the euro as an international reserve currency, which does not apply to the US dollar.

Conclusion

In its first decade of existence, the euro has been an impressive success. However, challenges are likely to arise during the next decade. First, the present financial crisis and economic recession are likely to mark a structural break for the development of finance and credit-driven growth not only at the global level but also for the euro area. But while adjustment to a world without credit-financed domestic demand growth and big inter-

national current account imbalances can be facilitated by exchange rate changes at the global level, this is not possible within the euro area. There, adjustment in the deficit countries needs to be engineered through expenditure reduction and relative cost deflation. This is likely to be very painful and may test the resolve of politicians to maintain the EMU as a hard currency area (or even the EMU itself).

Second, the recession and financial crisis are threatening fiscal and financial stability in a currency union without a central political authority. Fiscal discipline is likely to come under pressure as the recession deepens, and financial stability may be threatened when smaller or weaker euro area governments are overwhelmed by the cost of the financial crisis. As a result, markets are beginning to differentiate more clearly among government and financial debt of individual EMU countries. Differentiation will be reinforced in the future when more EU member countries join the euro—as seems now increasingly likely—and economic divergence among EMU countries will increase further. While a widening of bond yield spreads among EMU member countries may be welcomed by those who thought that the earlier narrowing would undermine fiscal policy discipline, it is also a step toward reducing the financial integration achieved during the last decade.

The implications for the international role of the euro are mixed. On the one hand, as the EMU expands, the euro's role as an anchor and international transaction currency will grow. On the other hand, the role of the euro as a store of wealth for global investors may be undermined by the lack of an integrated euro area financial system and market. Compared with the US dollar, the euro may come to look like a king without a country. Perhaps it was not entirely coincidental that the euro weakened against the dollar as the financial crisis deepened. It may well have reminded investors that history has not been too kind to kings without countries.

