PRELIMINARY: NOT TO BE QUOTED: CRITIQUES AND COMMENTS WILL BE MOST WELCOME <mdutta@rci.rutgers.edu>

THE THEORY OF OPTIMUM CURRENCY AREA REVISITED: LESSONS FROM THE EURO/DOLLAR COMPETITIVE REGIMES"

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I PERSPECTIVE

Floyd Norris (The New York Times January 03, 2005) writes about "a dollar with no muscle". Jonathan Fuerbringer (The New York Times Saturday November 6th, 2004) drew our attention when: "The dollar skidded a record low against the euro...(Friday, January 5th)…" "…The dollar fell as much as 0.8 percent during the day and was down 0.7 percent from Thursday in late trading in New York…" "…With the euro now at $ 1.2962, the dollar has fallen 2 percent this year and 36 percent since its high against the euro in October 2000," he adds. The dollar continues to "skid" with the euro at $ 1.3483 on January 3, 2005.

Ranking economists of our academic profession have joined the debate and they argue that euro-dollar exchange rate fluctuations will help correct the imbalance in the current account of USA. Other things being equal, the neo-classical theory of international trade based on one or another form of the theory of comparative advantage will eventually contribute to this desired outcome. However, other things are seldom equal. One important fact has been ignored. Of the 191 sovereign nation state economies as per the membership list of the United Nations, when one economy is too dominant in terms of its shares of world output and trade, the market ceases to be competitive. Given the fact that a large number of member economies enjoy marginal shares of world output

and trade and that a small number of the 191 economies enjoy a relatively larger share of world output and trade, the world market is tilted against the majority of the member economies. They are price-takers (Linnemann. H , Dutta. M 1962, 1965, 1976) as they have no ability to be competitive in the world market.

One may consider yet another interesting aspect relative to the imbalance in US current account. Will our dollar consumers cut down their consumption of euro imports as they find the euro imports more expensive? American consumers may not be so responsive to the market because ever since WWII for decades when dollar was the king they have become consumers of much of the world output. Of course, in the long run the theory is expected to prevail. Economists are familiar with the statement that in the long run we all are dead.

The fact of the twin deficits – the current account deficit and the budget deficit - certainly adds to the complexity of the economic situation. The huge budget deficit and the magnitude of national debt, much of which is owned by foreigners, most certainly limit the potential of optimum operational success of exchange rate fluctuations.. The fact that much of the US budget deficit and national debt can be attributed to our war efforts in Iraq and elsewhere further aggravates the situation.. If the deficit was incurred to augment the productivity of the US economy, it would have a different impact. The confidence of the rest of the world and also of the US investors in the US economy and its dollar would have remained unshaken.

Indeed, the dollar does have its muscle, defined in terms of its shares of world output and trade.. But there now is a competing currency, the euro, with a relatively stronger muscle, as defined by its shares of world output and trade. It is instructive to note that in 2003 the US share of world output at 26.07 percent compares with the EU -

25 share at 29.06 percent .The latest figures for trade – exports and imports – in 2000 are quite revealing. For world imports, the US share at 15.85 percent compares with the EU-25 share at 43.60 percent. While for world exports the US share at 11. 78 percent compares with the EU-25 share at 43.60 percent. (See Tables 2A, 3B and also appendix.)

We need to take note of two important factors, contributing to the structural changes in the global market. (A) The first factor occurred on August 15, 1971 when the fixed gold value of the dollar, an ounce of pure gold at US$ 35, was discontinued. Charles Kindleberger (1985) made an eloquent exposition in his presidential address to the American Economic Association when he stated that it was too much for the dollar to bear the burden of military and economic security of the free world for an indefinite period.

Some of us wrongly argued that it would be an occasion to the return to a 100 percent gold exchange regime. What we got was the GROUP of 5 , then expanded to the GROUP of 7 and on to the GROUP of 8 - ad hoc GROUPS of the 5, 7 or 8 most industrialized economies, inclusive of Russia. The large number of pre-industrialized and yet-to-be industrialized economies, factually 183 of 191 of the UN member sovereign nation state economies, were left out of this compact.

Earlier the collapse of the imperial economic groupings became a part of history. One single reason was the exclusive decision making authority of the imperial power to make and implement macro-economic decisions (Dutta 1999). “NO REPRESENTATION, NO TAXATION,” was the battle cry of one colony.. So was the protest against the Salt Tax Law in another imperial colony at another time. The post-WWII regime of the free market economies of the free world led by USA and the communist economies led by USSR has ceased to exist.

(B) The second factor to be taken note of is the fact that there has been a change in the traditional concept of sovereignty and that there have been changes in sovereign nation state economies (Dutta 1995).. The Soviet Union has ceased to exist. On the other hand sovereign nation states in Western Europe have progressed to map out one economy on to one geography – the continent of Europe.. The concept of continental economic regionalization may be the substantive basis for globalization, anchored to the concept of free flow of trade, free flow of investment and free movement of labor. Each such regional group will have competitive shares of world output and trade and will be competitive actors in the global market. Research on American Hemispheric Economic Cooperation, Asian Economic Cooperation, African Economic Union have been extensively undertaken.

After prolonged debates and dialogues, the Asia-Pacific Economic Cooperation (APEC) became a formal institution in 1989 with nine members inclusive of USA, Canada, Australia, New Zealand and Japan. APEC has since then expanded to 25 members inclusive of Russia, and is a forum of sovereign nation state economies along the Pacific on the Asian and American shores and in the South Pacific. I have discussed that the two sets of economic forces, - push and pull factors – led to the formation of APEC (Dutta 1999). For three reasons APEC has proven to disappoint many researchers. First, as the Atlantic Ocean has been a natural divide between Europe and the Americas, the Pacific Ocean is no less a divide between Asia and the Americas. One can argue that it is a much larger divide. Indeed, the case for belonging to a common geography observable on the map of the world is truly absent for APEC. The map of Europe is so spectacularly observable for the European Union. (EU). Secondly, APEC by adopting its 10-20 formula, has promised to deliver free trade amongst the industrialized members by

2010 and for all 21 member economies by 2020.. Indeed, it will be a long wait for any specific delivery. Finally, at the two recent APEC summit meetings the focus of deliberations was on global terrorism and security, not on economic cooperation agenda items, as such. True, that without security no economic agenda can be operationally successful. In 2004, one must take note of the fact that soon after the APEC Summit in Chille, an economic summit for Asian Economic Cooperation was held in Asia to review economic cooperation amongst APEC member economies in Asia. China, South Korea, Japan, Thailand, Singapore, Malaysia, Indonesia, the Philippines plus non-APEC member economies - India, Myanmar, Laos, Cambodia, Brunei Darssalam, and Viet Nam, Indeed, Asian economic cooperation based on the 3 (Japan, South Korea and China) plus 5 (Thailand, Singapore, Malaysia, Indonesia, the Philippines) model has been in regular consultation since 1998. At the Asian Economic Summit at Jakarta, Indonesia in 2003, the 3 plus 5 model was expanded to 4 China, Japan, Korea and India) plus 10 (original 5 from Southeast Asia and Mayanmar, Cambodia, Laos, Viet Nam and Brunei), Without macroeconomic cooperation, defining intra-regional monetary and fiscal guidelines, a free trade regime cannot function optimally (Dutta, 1992, 2002 and 2000).

The post-WWII global economic structure has collapsed. The Cold War is hopefully a part of history. To appreciate the emerging new paradigm of the international economic framework in the post-Cold War regime, a revisit with the theory of Optimum Currency Area is in order..

II. THE THEORY OF OPTIMUM CURRENCY AREA

Mundell taught us a theory of optimum currency area in his seminal work in 1961 (Mundell 1961, see also Mundell 1970, 1999, 2003). Of course until 1971, US dollar was the only global currency and it was the most valued international reserve currency. The concept of an optimum currency area can help explain the new continental economic regionalism. Okita (1989) sought to explain policy approaches in the framework of economic regional community in the context of global economic cooperation, and thus responded to the question if we will have one world or several.

THE EUROPEAN UNION (EU)

In what follows we review the present standing of the European Union.. Politics is not just the art of the possible, but as Jean Monnet taught us, it is also the art of making possible tomorrow what cannot yet be done today..(Monnet, J 1978) MEMOIRS (English Translation) (See also Dutta, M 2004; Issing, Otmar 1996,1999,2001, 2002; Letiche John M 1993, 2000 ; Welsh, Michael 1999.;Vanthoor, Wim F. V. 2002;Hesse, Helmut 1993:Temperton, Paul 1998; Obstfeld, Maurice 1999).

The progression of European economic integration has been a unique process since the Benelux Customs Union in 1948. The Treaty of Brussels – Treaty on Economic, Social and Cultural Cooperation and Collective Self-Defense – was signed in 1948. The European Coal and Steel Community (ECSC) brought together Germany, France, and Italy with the 3 Benelux countries, Luxemburg, Denmark and the Netherlands, effective July 1952. The historical perspective of the post-WWII Western Europe cover important steps : The Treaty of Rome, effective January 1 1958, One Europe Treaty 1986, the

Maastricht Treaty 1992, the European Central Bank and Euro 1999, The Amsterdam Treaty and the Irish Referendum of 2002 and finally admission of ten new members as of now. Europeanization of Europe is now a reality. The rest of the world must be prepared to accept it. A process of learning is involved.

THE PRESENT EU ECONOMIC STRUCTURE

Table 1A presents the population base. In 2003, EU -25 with its 453.90 million people is the third largest economy, next to China and India, while USA with its 291.04 million people is now the 4^{th} , no longer 3^{rd}., largest economy. EU-25 has 7.24 percent of the world population while USA's share is 4.64 percent.. Table 1A shows that the pattern of differences between EU -25 and USA in terms of population remain about the same since 1960.. Table 1B presents the change in the EU population base between EU-15 and the new 10. The EU-15 share has historically been at about 83 percent while that of the new 10 has been at about 17 percent for the given time period.. In 2003, the new 10 adds 74.16 million people to EU-15's total of 379.74 million, bringing the EU 25 total to 453.90 million. The comparative rates of growth of population is not the focus of the present study.

Tables 2A and 2B present the relevant data for Gross Domestic Product (GDP) (constant 1995 US4 in billions). As of 1980, total EU-25 GDP crossed over the US total, and ever since it holds the lead. In 2003, EU-25 GDP at 29.06 percent of world total is higher than USA's 26.07 percent share of the world total. The relative position has been same for 1980, 1990 and 2000.. Table 2B presents the comparative GDP base of EU-15 and the new 10. It is instructive to note that while the new 10 adds some 17 percent to

the total EU-25 population base in general , it adds just 3.52 percent to total EU-25 GDP in 2000 for the year we have data for all 10 new member countries.

Tables 3A and 3B present trade data, exports as well as imports. Table 3A tells us that Belgium, Denmark, France, Germany, Italy, the Netherlands Sweden and the UK are important trading nations, the UK being the leading trading economy. Table 3B presents the comparative data of EU-25 and US. The shares of EU-25 for both world imports and exports over the years under review have been 40-plus percent while USA's shares of world imports and world exports have persistently been at about 11 per cent. Be it also noted that balancing the export-import account remained a problem for both EU and US.

Table 4A presents average monthly exchange rates: USD/Euro for January 1999 through December 2004. Fluctuations of exchange rates between US dollar and euro has been a subject of great concern. It impacts some 800 million people of the two economic units with 55+ percent of world GDP and 55+ percent world trade . Needless to add that it impacts the economies of the rest of the world. Figure 1 describes the profile based on Table 4A. Table 4B covers the quarterly euro/dollar exchange rate fluctuations for 1999.I through 2004.IV. Figure 2 covers the profile of data presented in Table 4B.

Table 5 presents a profile of economic structures of the EU member economies. Of EU-15, the profile is one of mature industrialized economies excepting Greece. In 2000, each member economy has a marginal share from their respective agricultural sectors at a rate between 1 and 4 percent of GDP, while shares from their industry sectors are at about 30 percent and shares from their respective service sectors are at 60-70 percent . In the same year Greece continues to have 7.57 percent share of GDP form its agricultural sector..

EURO/DOLLAR EXCHANGE RATE

Let us turn to the subject of euro/dollar exchange rate fluctuations. Table 6 presents share of official foreign exchange holdings for the selected years since 1999 when euro became an international currency. For all countries, US dollar, Japanese yen, UK Pound Sterling continue to hold their respective shares of the official world currency reserve.. For the Industrialized countries as well as for the Developing countries, the picture in general remains similar. The point to be underscored is that for the new currency, euro, managed by the new central bank, European Central Bank (ECB) since January 1, 1999, it is a case of winning its market share. In the post-WWII and the Cold War regimes, the US dollar became the global currency. Given its shares of world output and trade, the euro is a challenge. The Japanese yen and the UK pound sterling do not have competitive shares of world output and trade and they will not be a challenge to the US dollar.

Three factors warrant careful review. First, Euro is the official currency of the 12.members of EU-15 as UK, Denmark, and Sweden continue to remain the 3 out-members. They are members of the EU and as such they enjoy advantages of free flow of trade, free flow of investment and free movement of labor in the one integrated market of one EU economy. Sooner or later the three will have to opt for euro or leave the EU. We have reasons to believe that they will elect to join the euro regime. In the World Trade Organization (WTO), the EU is recognized as one member represented by one representative with one vote. One can argue that the three currencies of the 3 out-members of EU-15 are sheltered currencies and are not truly free floating currencies in the global market.

A suggestion to stabilize euro/dollar exchange rate will involve immediate approval of ECB's full membership of the IMF. However, the principle of competition between the euro and dollar economic regimes alone will optimize global economic gains. A plan to establish a euro/dollar hegemony will be counterproductive. The concept of "Anglo-Saxon currencies (the pound, Canadian dollar, Australian dollar, New Zealand dollar)" may provoke a new currency debate on race and caste. Will that be an optimal option? The Japanese yen will have a different framework until an Asian economic community is formally instituted.

The new 10 members of EU will have to go through a process to become full members of the euro regime. The new 10 will have an interest in joining the euro regime since that will facilitate free flow of investment from the rest of EU since such investments will be free from the risk of exchange rate fluctuations. The rest of EU will also be a market for their products and free flow of trade with EU will facilitate the process. Europeanization of Europe will essentially be an economic reality.

Once the process will have been completed, the EU -25 with its shares of world output and trade will be a challenge for the US dollar. The Rest of the World will have to be engaged in economic activities, trade as well investment, with both EU and US and they will need to hold both currencies as their respective official reserve shares.

Secondly, ECB is not yet a member of the International Monetary Fund (IMF). True, ECB has an "OBSERVER STATUS"at the IMF.. Until EU will have been a political unity with one flag, one constitution and one Chief Executive, the EU must continue to work with its OBSERVER status. The EU is engaged in adopting its own constitution and the process will ensure EU's political integration. Be it noted that a great deal of functional integration for environment, public health , terrorism and security, and

competitive market order has been accomplished. EU has appointed an Executive Head with the European Parliament and the European Judiciary . The core issue is whether the governments of each member country will surrender its sovereign power to the EU Government – executive, parliament and judiciary. One money will lead to one Europe as Otmar Issing forcefully argues. For the European Central Bank (ECB) in 1999, the twelve member countries of the euro regime voluntarily surrendered their monetary sovereignty under a pact of growth with stability so that fiscal policies could be effectively tailored to ECB's monetary policy. The fact that they adopted the pragmatic design of divisibility of the concept of sovereignty is to be taken note of. The process can be a learning model for voluntarily surrendering political sovereignty by the EU member countries to one EU government. Once the process will have been completed, say by 2007, the ECB will be a member of the International Monetary Fund and the World Bank with full voting power. Indeed with EU's share of world output, higher than that of USA, it will have a commanding status at the Bank. That will add to the demand for Euro as official reserve currency of other industrialized and developing economies.

Finally, I argue that the process of Europeanization of Europe and the competitive status of its currency, euro , cannot be reversed. One rational option for the US and for the US dollar under consideration will be to sponsor the American hemispheric Economic Union – Americanization of the Americas. Indeed, since 2002, the inter-American economic cooperation has been one of our agenda. Several hemispheric economic summits with all sovereign nation state economies in the North and South Americas, excepting Cuba, have been held. A proposal to institute Free Trade Area of the Americas (FTAA) by 2005 has been adopted.

EU & ONE REGIONAL ECONOMY

The appreciation of EU warrants a comprehensive understanding of the core of the economic union in Europe. Irrespective of diversities – linguistic, religious, life-style - the people belonging to one common geography, Europe, as observed on the map of the world, will be citizens of EU. True, historical experiences of war and destruction helped the new awareness of oneness and unity. The issue is one of learning from experience. The issue for the rest of the world is to learn from the EU experience and hopefully avoid wars and destructions amongst countries in a given region.

One economic unit in a geographic unit with total integration of the regional economy with well-specified micro-and –macro economic parameters –transparent and judicially enforceable must be in place. It is far from the traditional Free Trade Area (FTA) or Customs Union based on one or selected items of trade. FTA in EU regime ensures free flow of trade of all goods and services amongst the EU member economies, no trade barriers and restrictions and they have a common set of restrictions vis-à-vis the rest of the world , with no exception. Goods and services in trade in EU are standardized by mutual accreditation by member countries. Free flows of investment are immune from the risk of exchange rate fluctuations, as they have a common currency. Free movement of labor within EU has not caused any problem. No mass migration from one member country with relatively low income to another with relatively high income has taken place. Indeed, free flows of investments have helped taken jobs where the people - unemployed or under-employed - were. Will the American Hemispheric Economic Union be able to successfully address these crucial issues?

CONCLUSION

The euro-dollar exchange rate fluctuation is a critical issue and it must be addressed with a well specified agenda. Continental economic regionalization is expected to be the order of the new economic paradigm for economics of globalization. We have stated in an earlier section, PERSPECTIVE, two alternative models of Asian economic cooperation is being actively considered, one - 3 plus 5 and another 4 plus 10. A preparatory committee for the African Economic Union consisting of all 53 sovereign nation state African economies with President of South Africa as its chairperson is in work sine 2002. For the rest of the world the future researcher must do the assignment. Border definitions of a continent will be left to be answered.. For a bi-continental economy, such as Russia, the decision will have to be made to opt for one continent for one common economy with one common currency.

The continental economic regions will have competitive shares of world output and trade and will contribute competitive shares to the capital funds of international financial institutions, such as The World Bank and the IMF, and will make economic decisions based on economic merits of the issues confronting each regional compact. Thus, the world economic order will be effectively competitive and the economies of the world at large, no longer grouped into one of price-takers and one of price-makers - will make economic gains (Dutta 2000).

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Table 1A: Population, total (in millions)						
	1960	1970	1980	1990	2000	2003
Austria	7.05	7.43	7.55	7.73	8.01	8.06
Belgium	9.12	9.64	9.85	9.97	10.25	10.35
Cyprus	0.57	0.62	0.61	0.68	0.76	0.77
Czech Republic	9.55	9.78	10.23	10.36	10.27	10.20
Denmark	4.58	4.93	5.12	5.14	5.34	5.39
Estonia	1.22	1.37	1.48	1.57	1.37	1.35
Finland	4.43	4.61	4.78	4.99	5.17	5.21
France	45.68	50.77	53.88	56.74	58.89	59.73
Germany	72.67	77.72	78.30	79.43	82.21	82.55
Greece	8.33	8.79	9.64	10.16	10.56	10.68
Hungary	9.98	10.34	10.71	10.37	10.02	10.12
Ireland	2.83	2.95	3.40	3.51	3.81	3.95
Italy	50.20	53.82	56.43	56.72	57.69	57.65
Latvia	2.13	2.37	2.54	2.67	2.37	2.32
Lithuania	2.78	3.14	3.41	3.70	3.51	3.45
Luxembourg	0.32	0.34	0.37	0.38	0.44	0.45
Malta	0.33	0.33	0.36	0.36	0.39	0.40
Netherlands	11.49	13.04	14.15	14.95	15.92	16.22
Poland	29.56	32.53	35.58	38.12	38.65	38.20
Portugal	8.94	9.04	9.77	9.90	10.13	10.19
Slovak Republic	3.99	4.53	4.98	5.28	5.39	5.38
Slovenia	1.58	1.73	1.90	2.00	1.99	1.96
Spain	30.46	33.78	37.39	38.84	40.50	41.10
Sweden	7.48	8.04	8.31	8.56	8.87	8.96
United Kingdom	52.37	55.63	56.33	57.56	58.88	59.28
Total EU Population	377.65	407.25	427.08	439.67	451.40	453.90
% of World	12.50%	11.08%	9.64%	8.37%	7.46%	7.24%
% Growth (10 Year Period)		7.84%	4.87%	2.95%	2.67%	0.55%
United States	180.67	205.05	227.23	249.44	282.22	291.04
% of World	5.98%	5.58%	5.13%	4.75%	4.66%	4.64%
% Growth (10 Year Period)		13.49%	10.81%	9.78%	13.14%	3.13%
World Population	3,020.38	3,675.59	4,430.07	5,252.77	6,051.50	6,271.70
% Growth (10 Year Period)		21.69%	20.53%	18.57%	15.21%	3.64%
Source: World Development Indicators, The World Bank						

Table 1B: EU Member Countries: Population, total (in millions)						
	1960	1970	1980	1990	2000	2003
Original 15						
Austria	7.05	7.43	7.55	7.73	8.01	8.06
Belgium	9.12	9.64	9.85	9.97	10.25	10.35
Denmark	4.58	4.93	5.12	5.14	5.34	5.39
Finland	4.43	4.61	4.78	4.99	5.17	5.21
France	45.68	50.77	53.88	56.74	58.89	59.73
Germany	72.67	77.72	78.30	79.43	82.21	82.55
Greece	8.33	8.79	9.64	10.16	10.56	10.68
Ireland	2.83	2.95	3.40	3.51	3.81	3.95
Italy	50.20	53.82	56.43	56.72	57.69	57.65
Luxembourg	0.32	0.34	0.37	0.38	0.44	0.45
Netherlands	11.49	13.04	14.15	14.95	15.92	16.22
Portugal	8.94	9.04	9.77	9.90	10.13	10.19
Spain	30.46	33.78	37.39	38.84	40.50	41.10
Sweden	7.48	8.04	8.31	8.56	8.87	8.96
United Kingdom	52.37	55.63	56.33	57.56	58.88	59.28
Total	315.95	340.53	355.27	364.56	376.68	379.74
% of EU25	83.66%	83.62%	83.19%	82.92%	83.45%	83.66%
New 10						
Cyprus	0.57	0.62	0.61	0.68	0.76	0.77
Czech Republic	9.55	9.78	10.23	10.36	10.27	10.20
Estonia	1.22	1.37	1.48	1.57	1.37	1.35
Hungary	9.98	10.34	10.71	10.37	10.02	10.12
Latvia	2.13	2.37	2.54	2.67	2.37	2.32
Lithuania	2.78	3.14	3.41	3.70	3.51	3.45
Malta	0.33	0.33	0.36	0.36	0.39	0.40
Poland	29.56	32.53	35.58	38.12	38.65	38.20
Slovak Republic	3.99	4.53	4.98	5.28	5.39	5.38
Slovenia	1.58	1.73	1.90	2.00	1.99	1.96
Total	61.70	66.71	71.81	75.11	74.72	74.16
% of EU25	16.34%	16.38%	16.81%	17.08%	16.55%	16.34%
Source: World Development Indicators, The World Bank						

Table 2A: GDP (constant 1995 US$, in billions)						
	1960	1970	1980	1990	2000	2003
Austria	74.34	117.78	167.91	212.47	269.37	275.91
Belgium	94.28	150.46	209.59	255.75	316.69	324.83
Cyprus	..	..	3.88	7.11	10.67	11.77
Czech Republic	..	..	..	54.60	55.28	59.79
Denmark	74.67	115.65	139.90	163.49	205.89	213.99
Estonia	..	..	5.06	6.00	5.19	6.14
Finland	43.30	69.21	98.80	134.15	164.09	171.03
France	484.75	833.28	1,154.01	1,473.22	1,772.53	1,833.35
Germany	..	..	1,769.77	2,221.56	2,687.82	2,708.02
Greece	31.58	65.83	103.20	110.50	139.13	157.63
Hungary	15.11	28.46	44.96	50.35	54.39	60.14
Ireland	15.47	23.33	37.05	52.88	105.98	121.92
Italy	331.48	577.52	823.48	1,030.05	1,207.92	1,238.02
Latvia	..	4.28	6.94	9.64	6.19	7.61
Lithuania	..	..	..	12.64	9.16	11.08
Luxembourg	5.04	7.12	9.19	14.90	25.61	26.53
Malta	0.39	0.63	1.70	2.49	4.05	..
Netherlands	136.79	224.13	298.90	373.34	497.58	502.57
Poland	..	..	..	113.99	167.63	182.62
Portugal	24.30	45.04	71.56	98.55	129.93	131.58
Slovak Republic	..	..	..	22.49	23.25	26.25
Slovenia	..	..	..	..	23.15	25.07
Spain	139.22	284.32	405.96	542.10	705.15	756.29
Sweden	101.44	159.65	193.77	240.29	291.56	305.23
United Kingdom	498.64	659.70	799.28	1,040.25	1,309.07	1,390.69
Total EU GDP	2,070.79	3,366.39	6,344.91	8,242.79	10,187.29	10,548.07
% of World GDP	26.15%	25.00%	32.64%	31.23%	29.73%	29.06%
% Growth (10 Year Period)		62.57%	88.48%	29.91%	23.59%	3.54%
United States	2,376.78	3,464.00	4,771.90	6,520.50	8,955.10	9,463.10
% of World GDP	30.01%	25.72%	24.55%	24.71%	26.14%	26.07%
% Growth (10 Year Period)		45.74%	37.76%	36.64%	37.34%	5.67%
World GDP	7,919.60	13,467.38	19,439.11	26,391.74	34,263.97	36,294.28
% Growth (10 Year Period)		70.05%	44.34%	35.77%	29.83%	5.93%

Source: World Development Indicators, The World Bank

Table 2B: EU Member Countries: GDP (constant 1995 US$, in billions)						
	1960	1970	1980	1990	2000	2003
Original 15						
Austria	74.34	117.78	167.91	212.47	269.37	275.91
Belgium	94.28	150.46	209.59	255.75	316.69	324.83
Denmark	74.67	115.65	139.90	163.49	205.89	213.99
Finland	43.30	69.21	98.80	134.15	164.09	171.03
France	484.75	833.28	1,154.01	1,473.22	1,772.53	1,833.35
Germany	..	..	1,769.77	2,221.56	2,687.82	2,708.02
Greece	31.58	65.83	103.20	110.50	139.13	157.63
Ireland	15.47	23.33	37.05	52.88	105.98	121.92
Italy	331.48	577.52	823.48	1,030.05	1,207.92	1,238.02
Luxembourg	5.04	7.12	9.19	14.90	25.61	26.53
Netherlands	136.79	224.13	298.90	373.34	497.58	502.57
Portugal	24.30	45.04	71.56	98.55	129.93	131.58
Spain	139.22	284.32	405.96	542.10	705.15	756.29
Sweden	101.44	159.65	193.77	240.29	291.56	305.23
United Kingdom	498.64	659.70	799.28	1,040.25	1,309.07	1,390.69
Total	2,055.29	3,333.03	6,282.37	7,963.49	9,828.33	10,157.59
% of EU25	99.25%	99.01%	99.01%	96.61%	96.48%	96.30%
New 10						
Cyprus	..	..	3.88	7.11	10.67	11.77
Czech Republic	..	..	..	54.60	55.28	59.79
Estonia	..	..	5.06	6.00	5.19	6.14
Hungary	15.11	28.46	44.96	50.35	54.39	60.14
Latvia	..	4.28	6.94	9.64	6.19	7.61
Lithuania	..	..	..	12.64	9.16	11.08
Malta	0.39	0.63	1.70	2.49	4.05	..
Poland	..	..	..	113.99	167.63	182.62
Slovak Republic	..	..	..	22.49	23.25	26.25
Slovenia	..	..	..	..	23.15	25.07
Total	15.50	33.36	62.54	279.30	358.96	390.47
% of EU25	0.75%	0.99%	0.99%	3.39%	3.52%	3.70%
Source: World Development Indicators, The World Bank						

Table 3A: Trade, Imports and Exports of EU25, (Constant 1995 US$, Billions)							
		1960	1970	1980	1990	2000	2003
Austria	Imports of goods and services	18.19	34.64	64.01	81.68	136.84	0.00
	Exports of goods and services	17.52	35.54	60.42	84.05	135.20	0.00
Belgium	Imports of goods and services	36.99	74.09	127.75	176.25	260.60	0.00
	Exports of goods and services	36.26	77.72	120.70	181.07	270.78	0.00
Cyprus	Imports of goods and services	0.00	0.00	2.45	4.06	0.00	0.00
	Exports of goods and services	0.00	0.00	1.76	3.66	0.00	0.00
Czech Republic	Imports of goods and services	0.00	0.00	0.00	23.25	40.44	0.00
	Exports of goods and services	0.00	0.00	0.00	24.68	38.60	0.00
Denmark	Imports of goods and services	23.77	34.80	46.64	50.28	78.89	0.00
	Exports of goods and services	22.93	31.50	45.06	58.58	91.20	0.00
Estonia	Imports of goods and services	0.00	0.00	0.00	0.00	5.08	5.90
	Exports of goods and services	0.00	0.00	0.00	0.00	4.86	5.16
Finland	Imports of goods and services	9.69	17.99	32.58	32.46	55.33	0.00
	Exports of goods and services	9.28	16.95	31.55	30.25	70.49	0.00
France	Imports of goods and services	60.29	127.45	263.37	327.31	484.05	0.00
	Exports of goods and services	67.16	125.90	235.21	313.00	506.04	0.00
Germany	Imports of goods and services	0.00	0.00	449.02	558.78	897.11	0.00
	Exports of goods and services	0.00	0.00	360.95	557.54	907.49	0.00
Greece	Imports of goods and services	4.80	11.02	28.66	30.80	44.17	0.00
	Exports of goods and services	2.77	6.34	24.36	19.95	33.47	0.00
Hungary	Imports of goods and services	0.00	9.23	18.55	14.37	42.82	0.00
	Exports of goods and services	0.00	8.57	17.58	15.68	40.73	0.00
Ireland	Imports of goods and services	5.51	10.03	22.33	27.69	89.45	0.00
	Exports of goods and services	4.59	8.04	17.12	30.13	103.90	0.00
Italy	Imports of goods and services	43.80	92.24	201.83	202.94	329.85	0.00
	Exports of goods and services	42.15	92.88	177.79	203.36	341.68	0.00
Latvia	Imports of goods and services	0.00	0.00	0.00	4.73	3.36	4.33
	Exports of goods and services	0.00	0.00	0.00	4.60	2.82	3.58
Lithuania	Imports of goods and services	0.00	0.00	0.00	7.67	4.69	6.63
	Exports of goods and services	0.00	0.00	0.00	6.58	4.11	5.97
Luxembourg	Imports of goods and services	3.97	5.76	8.75	14.94	33.21	0.00
	Exports of goods and services	4.60	6.67	8.58	15.51	38.89	0.00
Malta	Imports of goods and services	0.27	0.50	1.64	2.46	4.60	0.00
	Exports of goods and services	0.23	0.31	1.54	2.12	4.16	0.00
Netherlands	Imports of goods and services	62.33	103.60	157.42	188.87	309.75	0.00
	Exports of goods and services	63.28	97.44	152.69	201.68	334.99	0.00
Poland	Imports of goods and services	0.00	0.00	0.00	24.52	57.63	48.12
	Exports of goods and services	0.00	0.00	0.00	32.66	46.67	38.28
Portugal	Imports of goods and services	4.93	11.93	25.79	38.88	55.67	0.00
	Exports of goods and services	3.76	9.72	17.34	32.46	41.09	0.00
Slovak Republic	Imports of goods and services	0.00	0.00	0.00	7.99	17.03	20.88
	Exports of goods and services	0.00	0.00	0.00	5.97	16.46	20.48
Slovenia	Imports of goods and services	0.00	0.00	0.00	0.00	13.92	14.96
	Exports of goods and services	0.00	0.00	0.00	0.00	13.09	14.96
Spain	Imports of goods and services	9.78	38.66	69.63	107.06	228.57	0.00
	Exports of goods and services	11.76	35.72	60.08	88.28	212.53	0.00
Sweden	Imports of goods and services	22.52	37.15	57.97	68.36	117.21	0.00
	Exports of goods and services	22.13	36.62	54.96	69.57	133.62	0.00
United Kingdom	Imports of goods and services	107.75	141.53	199.04	276.73	390.65	0.00
	Exports of goods and services	100.84	147.13	216.52	249.91	365.19	0.00

Source: World Development Indicators, The World Bank

Table 3B: Trade, EU, USA, and the World, (Constant 1995 US$, Billions)							
		1960	1970	1980	1990	2000	2003
EU25 Trade	Imports of goods and services	414.60	750.64	1,777.44	2,272.06	3,700.93	100.83
	Exports of goods and services	409.27	737.06	1,604.21	2,231.29	3,758.05	88.43
	Net (X-M)	(5.33)	(13.58)	(173.23)	(40.77)	57.12	(12.40)
	% World Imports	0.43	0.42	0.46	0.45	0.44	n/a
	% World Exports	0.43	0.40	0.44	0.44	0.44	n/a
United States	Imports of goods and services	104.19	188.48	505.86	712.73	1,345.36	0.00
	Exports of goods and services	123.71	201.66	481.58	631.78	1,010.35	0.00
	Net (X-M)	19.52	13.17	(24.28)	(80.96)	(335.01)	0.00
	% World Imports	0.11	0.10	0.13	0.14	0.16	n/a
	% World Exports	0.13	0.11	0.13	0.13	0.12	n/a
World	Imports of goods and services	966.00	1,808.46	3,879.73	5,064.75	8,487.88	0.00
	Exports of goods and services	961.32	1,826.14	3,639.86	5,031.58	8,573.72	0.00
	Net (X-M)	(4.68)	17.68	(239.86)	(33.17)	85.84	0.00

Source: World Development Indicators, The World Bank

Table 4A: Average Monthly Exchange Rates: Euro and USD					
DATE	**USD to EUR**	**EUR to USD**	DATE	**USD to EUR**	**EUR to USD**
Jan-1999	0.8626	1.1599	Jan-2002	1.1310	0.8847
Feb-1999	0.8935	1.1198	Feb-2002	1.1493	0.8705
Mar-1999	0.9197	1.0879	Mar-2002	1.1421	0.8759
Apr-1999	0.9334	1.0719	Apr-2002	1.1290	0.8862
May-1999	0.9417	1.0625	May-2002	1.0910	0.9171
Jun-1999	0.9625	1.0395	Jun-2002	1.0478	0.9552
Jul-1999	0.9666	1.0354	Jul-2002	1.0075	0.9931
Aug-1999	0.9425	1.0615	Aug-2002	1.0226	0.9784
Sep-1999	0.9535	1.0494	Sep-2002	1.0207	0.9801
Oct-1999	0.9340	1.0713	Oct-2002	1.0197	0.9812
Nov-1999	0.9681	1.0336	Nov-2002	0.9981	1.0023
Dec-1999	0.9894	1.0113	Dec-2002	0.9808	1.0202
Jan-2000	0.9879	1.0131	Jan-2003	0.9420	1.0621
Feb-2000	1.0164	0.9844	Feb-2003	0.9279	1.0780
Mar-2000	1.0355	0.9663	Mar-2003	0.9274	1.0788
Apr-2000	1.0568	0.9470	Apr-2003	0.9212	1.0862
May-2000	1.1011	0.9089	May-2003	0.8658	1.1559
Jun-2000	1.0534	0.9499	Jun-2003	0.8569	1.1677
Jul-2000	1.0636	0.9408	Jul-2003	0.8787	1.1387
Aug-2000	1.1044	0.9060	Aug-2003	0.8968	1.1159
Sep-2000	1.1469	0.8727	Sep-2003	0.8893	1.1253
Oct-2000	1.1699	0.8561	Oct-2003	0.8546	1.1706
Nov-2000	1.1712	0.8546	Nov-2003	0.8541	1.1716
Dec-2000	1.1115	0.9007	Dec-2003	0.8137	1.2296
Jan-2001	1.0647	0.9400	Jan-2004	0.7940	1.2601
Feb-2001	1.0843	0.9229	Feb-2004	0.7927	1.2621
Mar-2001	1.0990	0.9109	Mar-2004	0.8154	1.2269
Apr-2001	1.1207	0.8929	Apr-2004	0.8327	1.2015
May-2001	1.1411	0.8771	May-2004	0.8335	1.2003
Jun-2001	1.1716	0.8540	Jun-2004	0.8233	1.2151
Jul-2001	1.1623	0.8610	Jul-2004	0.8149	1.2278
Aug-2001	1.1103	0.9013	Aug-2004	0.8199	1.2201
Sep-2001	1.0964	0.9126	Sep-2004	0.8194	1.2208
Oct-2001	1.1041	0.9062	Oct-2004	0.7997	1.2511
Nov-2001	1.1255	0.8891	Nov-2004	0.7692	1.3006
Dec-2001	1.1213	0.8922	Dec-2004	0.7466	1.3399
Source: Oanda, http://www.oanda.com/convert/fxhistory					

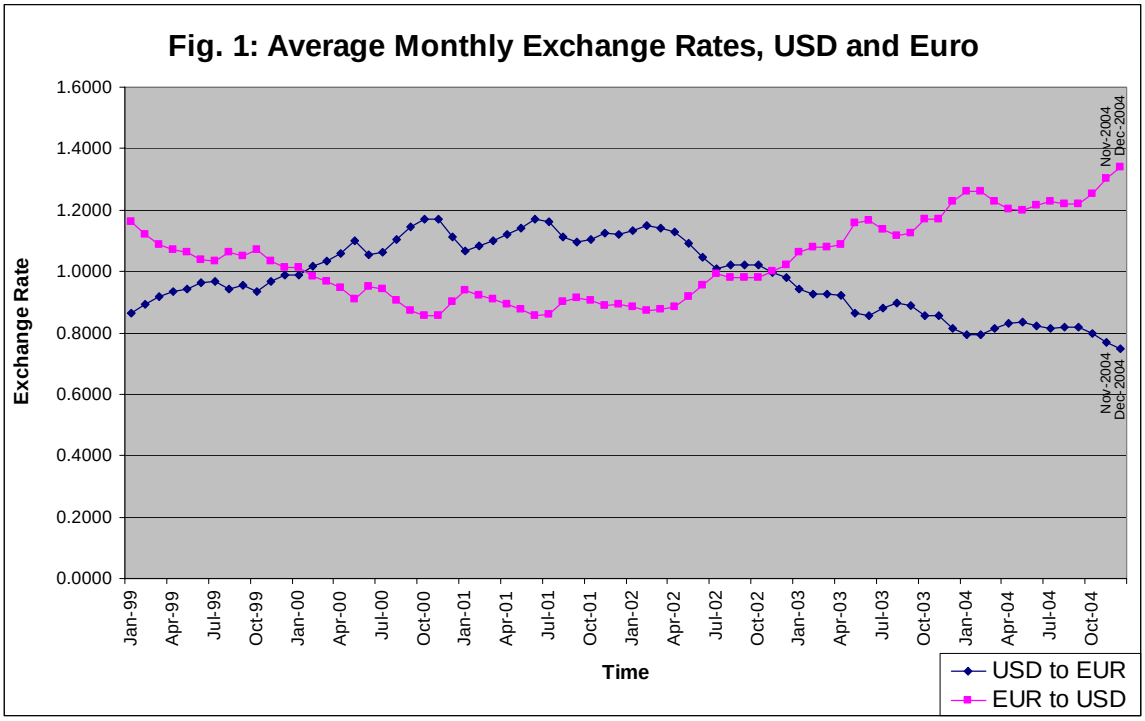
Fig. 1: Average Monthly Exchange Rates, USD and Euro
Exchange Rate
1.6000
1.4000
1.2000
1.0000
0.8000
0.6000
0.4000
0.2000
0.0000
Nov-2004
Dec-2004
Nov-2004
Dec-2004
Jan-99
Apr-99
Jul-99
Oct-99
Jan-00
Apr-00
Jul-00
Oct-00
Jan-01
Apr-01
Jul-01
Oct-01
Jan-02
Apr-02
Jul-02
Oct-02
Jan-03
Apr-03
Jul-03
Oct-03
Jan-04
Apr-04
Jul-04
Oct-04
Time
USD to EUR
EUR to USD

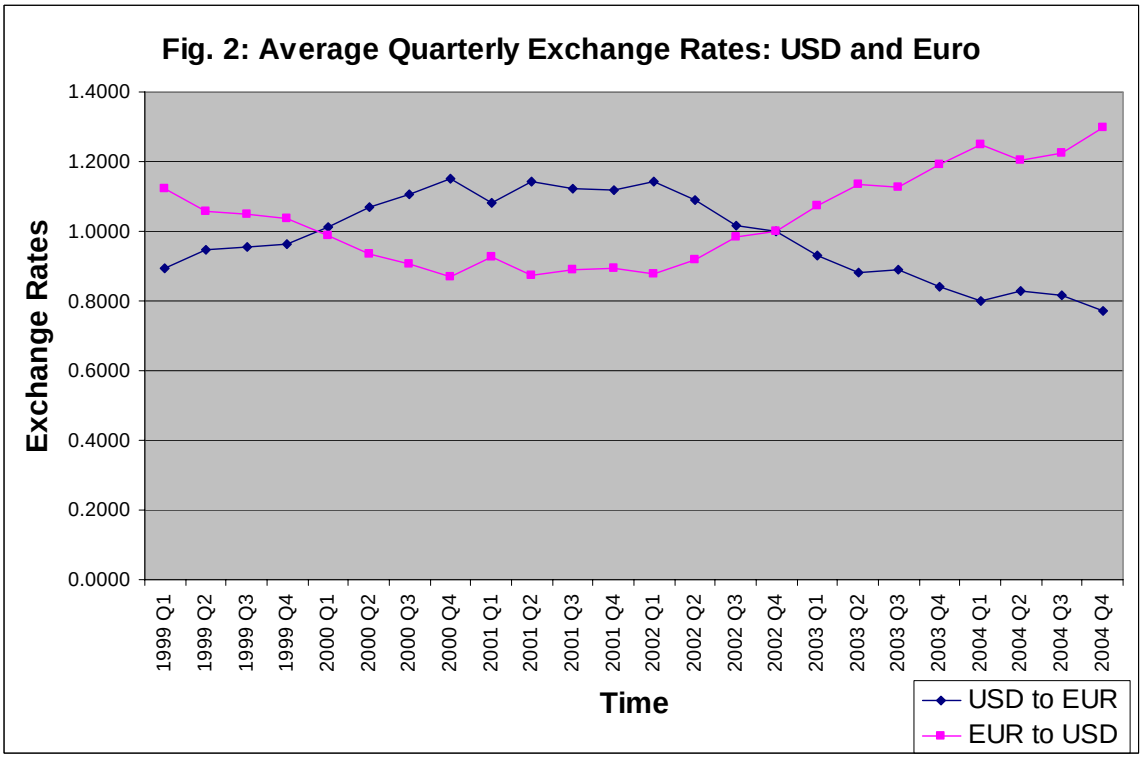
Fig. 2: Average Quarterly Exchange Rates: USD and Euro
Exchange Rates
1.4000
1.2000
1.0000
0.8000
0.6000
0.4000
0.2000
0.0000
1999 Q1
1999 Q2
1999 Q3
1999 Q4
2000 Q1
2000 Q2
2000 Q3
2000 Q4
2001 Q1
2001 Q2
2001 Q3
2001 Q4
2002 Q1
2002 Q2
2002 Q3
2002 Q4
2003 Q1
2003 Q2
2003 Q3
2003 Q4
2004 Q1
2004 Q2
2004 Q3
2004 Q4
Time
USD to EUR
EUR to USD

Table 4B: Quarterly Exchange Rates: Euro and USD

DATE	**USD to EUR**	**EUR to USD**
1999 Q1	0.8919	1.1226
1999 Q2	0.9458	1.0395
1999 Q3	0.9542	1.0494
1999 Q4	0.9638	1.0113
2000 Q1	1.0132	0.9663
2000 Q2	1.0707	0.9499
2000 Q3	1.1045	0.8727
2000 Q4	1.1506	0.9007
2001 Q1	1.0826	0.9109
2001 Q2	1.1444	0.8540
2001 Q3	1.1233	0.9126
2001 Q4	1.1168	0.8922
2002 Q1	1.1405	0.8759
2002 Q2	1.0893	0.9552
2002 Q3	1.0169	0.9801
2002 Q4	0.9996	1.0202
2003 Q1	0.9326	1.0788
2003 Q2	0.8811	1.1677
2003 Q3	0.8882	1.1253
2003 Q4	0.8407	1.2296
2004 Q1	0.8009	1.2269
2004 Q2	0.8298	1.2151
2004 Q3	0.8180	1.2208
2004 Q4	0.7719	1.2972

Source: Oanda,
http://www.oanda.com/convert/fxhistory

Table 5: Value Added, Sectoral Shares (% of GDP)						
Original 25		2000		New 10		2000
Austria	Agriculture	2.33		Cyprus	Agriculture	..
	Industry	32.72			Industry	..
	Services, etc.	64.94			Services, etc.	..
Belgium	Agriculture	1.42		Czech Republic	Agriculture	4.47
	Industry	27.84			Industry	40.92
	Services, etc.	70.74			Services, etc.	54.61
Denmark	Agriculture	2.78		Estonia	Agriculture	6.23
	Industry	26.86			Industry	29.01
	Services, etc.	70.36			Services, etc.	64.76
Finland	Agriculture	3.78		Hungary	Agriculture	4.30
	Industry	34.49			Industry	33.10
	Services, etc.	61.74			Services, etc.	62.60
France	Agriculture	2.80		Latvia	Agriculture	4.86
	Industry	25.48			Industry	25.35
	Services, etc.	71.72			Services, etc.	69.79
Germany	Agriculture	1.21		Lithuania	Agriculture	8.01
	Industry	30.41			Industry	30.86
	Services, etc.	68.38			Services, etc.	61.13
Greece	Agriculture	7.57		Malta	Agriculture	..
	Industry	21.81			Industry	..
	Services, etc.	70.62			Services, etc.	..
Ireland	Agriculture	3.77		Poland	Agriculture	3.57
	Industry	42.72			Industry	33.88
	Services, etc.	53.51			Services, etc.	62.55
Italy	Agriculture	2.87		Slovak Republic	Agriculture	4.17
	Industry	29.04			Industry	30.31
	Services, etc.	68.08			Services, etc.	65.52
Luxembourg	Agriculture	0.75		Slovenia	Agriculture	3.52
	Industry	19.55			Industry	37.21
	Services, etc.	79.69			Services, etc.	59.27
Netherlands	Agriculture	2.78				
	Industry	27.06				
	Services, etc.	70.15				
Portugal	Agriculture	3.67				
	Industry	30.38				
	Services, etc.	65.95				
Spain	Agriculture	3.66				
	Industry	30.23				
	Services, etc.	66.11				
Sweden	Agriculture	1.93				
	Industry	29.51				
	Services, etc.	68.56				
United Kingdom	Agriculture	1.05		United States	Agriculture	1.61
	Industry	28.49			Industry	24.45
	Services, etc.	70.46			Services, etc.	73.94

Source: World Development Indicators, The World Bank

Table 6: Share of Official Foreign Exchange Holdings in Selected Currencies (End of Year)					
Currency	1999	2000	2001	2002	2003
All Countries					
US Dollar	64.9%	66.6%	66.9%	63.5%	63.8%
Japanese Yen	5.4%	6.2%	5.5%	5.2%	4.8%
Pound Sterling	3.6%	3.8%	4.0%	4.4%	4.4%
Euro	13.5%	16.3%	16.7%	19.3%	19.7%
Industrialized Countries					
US Dollar	72.7%	72.5%	72.7%	69.1%	70.8%
Japanese Yen	6.5%	6.3%	5.6%	4.6%	4.0%
Pound Sterling	2.3%	2.0%	1.8%	2.2%	1.7%
Euro	10.8%	17.2%	17.5%	21.3%	20.9%
Developing Countries					
US Dollar	59.0%	62.2%	62.9%	59.8%	59.3%
Japanese Yen	4.6%	6.1%	5.4%	5.5%	5.2%
Pound Sterling	4.6%	5.1%	5.4%	5.8%	6.2%
Euro	15.6%	15.6%	16.2%	17.9%	18.9%
Source: IMF Annual Report 2004, IMF					

Appendix: Comparative Shares of World GDP and Exports