# The Transatlantic Economy

# **Dollar vs Euro relations amid the Global Financial Crisis**

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#### Introduction

The present study intends to describe and analyze recent trends in foreign exchange markets, specifically the United States Dollar and the Euro relations as well as the fundamentals behind monetary assets. After the collapse of the Bretton Woods system the United States Dollar kept its role as the premier international currency. Partially that was explained by the fact that there was no other currency that could rival against it. Neither, the Deutsche Mark, the British Pound nor the Japanese Yen were used in global transactions to the same extent. However, in 1999 the "Euro" was introduced and many scholars suggested the possibility that the new currency could eventually rival and surpassed the United States Dollar.

This investigation is divided into three sections. To begin with a small introduction on the role of money is presented to provide a theoretical framework; including a bibliographic review and the presentation of current debates regarding foreign exchange markets and international currencies. Afterwards, the most recent currency trends are covered from both an historical and a theoretical perspective. The second section outsets the collapse of the "big dollar" in 2001/2002, followed by the explanations for its small rebound in 2005 and its later drop. In addition, this section aims to illustrate the increasing role of the Euro.

The third section describes the latest financial crisis from a policy making perspective and analyzes how different policies in both sides of the Atlantic may influence the value of their currencies. Fundamentally, it presents short-run impacts as well as long-run concerns on the current financial crisis and its consequences in the foreign exchange markets.

## 1. What is money and what is International Money?

# 1.a. Definition of Money

Let's begin with the basics. Money can be defined by its three main characteristics: a) Medium of Exchange, b) Unit of Account, and c) Store of value. The first characteristic implies that money is an accepted means of payment and therefore it can be "traded" for other goods and services. In this sense, money is efficient in reducing various transaction costs associated with direct trading or barter of goods and services. As stated by Krugman and Obstfeld (2008) the second characteristic of money allows for translating different countries' money prices into comparable terms since it is a widely recognized measure of value. Finally, money can be used in order to transfer purchasing power; hence, it is an asset.

# 1.b. International Money: how a national currency can become "the world's currency"?

An international currency has intrinsically the same functions that a national currency has, with the difference that it is extensively used outside the country of issuance.

Function of Money	Government	Private Agents		
Store of Value	International Reserves	Investment Currency		
		(incl. currency substitution)		
Medium of Exchange	Vehicle Currency for Foreign Exchange Intervention	Invoicing (vehicle) currency for trade in goods and assets.		
Unit of Account	Anchor for currency peg	Quotation currency for trade in goods and assets.		

Source: Papaioannou and Portes, 2008

International money is essentially used by two types of economic agents: public agents, such as governments, and private agents like individuals and corporations.

As explained by Papaionnou and Portes since money is a store of value it is considered a financial asset. Consequently, governments may accumulate international currency. From a central bank's balance sheet perspective this accumulation produces an increase in net foreign assets. Private agents may use foreign currency for risk diversification, carry trades, and other investment opportunities (including arbitrage and speculation). In the function of being a medium of exchange, governments may use an international currency as an instrument for intervention in the foreign exchange market. On the other hand private actors use international currency for their transactions, for example in international trade. Finally, when a currency can be a unit of account internationally, monetary authorities from different countries may use it as an anchor for pegs. For individuals and corporations the presence of an international currency simplifies quotations and price comparisons.

Different scholars have analyzed the factors that determine the emergence and the maintenance of an international currency. Their findings can be summarized as follows:

- 1. Economic size GDP and trade
- 2. Economic strength growth rates
- 3. Financial stability low inflation, exchange-rate stability
- 4. Broad, deep and efficient financial markets
- 5. Confidence in the Currency Value
- 6. Political stability and geopolitical strength
- 7. Network Externalities and Inertia<sup>1</sup>

In general the status of international currency is linked to the economic size of the country of issuance. Overall, these are large and competitive countries that can create economies of scale and reduce marginal costs.

It is not enough for the economy to be big, but it has to be strong. Commonly international currencies belong to economies with a capacity to innovate and propel growth. Given the size of the economy, when the country grows it generates such a strong demand capable of bringing a bonanza to the rest of the globe. In the same line, a contraction of such economy negatively impacts the rest of the world. Therefore, a healthy growth with low rates of inflation and stable prospects are also important.

It is crucial for an international currency to be within a highly liquid and deep financial market. According to Cooper (1997) liquid secondary markets allow participants to quickly build up or liquidate large positions in the currency without fear of capital loss. In Greenspan's view a well-developed financial system is more likely to

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<sup>&</sup>lt;sup>1</sup> Papaioannou and Portes, 2008. Also Ewe-Ghee Lim, 2006. I have blended the determinants numerated in both articles.

attract business from abroad, where financial markets may be less developed or barriers to efficiency exist. This possibility makes it cheaper for market participants to borrow or invest abroad in an international currency and then exchange the proceeds for domestic currency, rather than conduct the transactions directly at home.

Any currency essentially depends on trust. When people accept a currency as a mean of payment, they trust the issuance institution behind the currency. The currency is nothing but a claim against that institution. In this sense both the currency and the institution should be stable. Political stability is related to the geopolitical strength of the country, hence, a country with a strong geopolitical presence and stable institutions may result extremely attractive for investors. However, a perception of decrease in the geopolitical strength may seriously damage the value of a currency causing shifts to others.

Finally, there is a determinant that is certainly hard to measure but seems to be extremely important, these are network externalities and the inertia associated with them. This implies an increase in the value of the currency as more people use it. Then, as people get use to it, it takes a lot of time to shift to another asset. There are many econometrics studies on this issue, though; a very simple explanation can illustrate what might be happening. Whenever we talk about a shift to a second currency, there is an implied assumption that a substitution effect is possible and that the consumer, or in this case the investor, is indifferent among the two goods. But, at some point and after years of choosing the same good, even when a currency is intrinsically a homogenous good, it could create a "brand effect". In this sense people use to this "brand", simply attach to it. This "stickiness" can be interpreted as inertia towards the brand, in this case the currency.

## 1.c. The Dollar as an international Currency

It was not until the end of World War II that the dollar became a real global currency. During the Bretton Woods conferences, few countries accorded a system to manage their commercial and financial relations. Financial stability was one of the main goals in the conference. In order to achieve this goal two major decisions where take. First, the International Monetary Fund was created as a supervisor. Second, a system of fixed exchange rates was formed, this allowed for the use of the dollar as a reserve currency. By that time, only the USD could provide the necessary liquidity to the system. The United States government fixed the value of the dollar at \$35 per ounce of gold and committed to supply full convertibility. So, members were required to establish a parity of their national currencies to a peg and to maintain exchange rates within a band of 1%. The system was based on the idea that the USD was "as good as gold". In fact, accumulating USD was still more desirable than holding gold because it paid an interest. By the early 70's the system was suffering from a series of shocks, in part related to episodes in the Middle East. At the end of 1971 the G-10 met and through the "Smithsonian Agreements" accorded to devaluate the dollar. However, this arrangement could not be implemented. In 1972 many currencies abandoned their pegs to the dollar. In 1973, the Bretton Woods system collapsed and currencies were allowed to float. In spite of this, the dollar is still the strongest international currency in the world. "As Mark Twain might have said, reports of the dollar's death have been greatly exaggerated. The dollar is still the dominant reserve currency for central banks and governments. The share of international reserves in dollars has actually been rising, not falling. The market in U.S. treasury securities is still the single most liquid financial market in the world, which makes it attractive for central banks to hold their reserves in this form. The dollar is still the dominant invoicing and vehicle currency in international trade. Petroleum and other commodities are still invoiced in dollars. There are, of course, good reasons for questioning whether this will remain the case." (Eichengreen, 2005)

#### 1.d. Dollar versus Euro, a debate

According to the Ewe-Ghee Lim, some scholars like Bergsten (1997), Mundell (1998), and Portes and Rey (1998), were optimistic the single currency of the European Economic and Monetary Union (EMU) would challenge the dollar immediately and even replace it eventually as the dominant currency. Indeed, Bergsten (1997) predicts that "as much as \$1 trillion of international investment may shift from dollars into euros"; and Mundell (1998) predicts that "the euro will become an international currency on the same scale as the dollar," anticipating transition problems from investors shifting out of dollars to euros. Other economists, notably Cooper (1997) and McKinnon (1998), were less sanguine. McKinnon (1998) argues the euro would only be an important regional currency, although this argument "in no way denigrate[s] the great contribution the euro could make to...the greater European economy (p. 60). Since 1999, other studies have been conducted, but the issue remains unsettled. McKinnon (2001, 2002, 2003) and Kenen (2002, 2003) see dollar dominance continuing, but Eichengreen (2005) is optimistic about the euro's prospects as a reserve currency. Taking a more historical perspective, Bordo (2003) and Dwyer and Lothian (2003) are cautiously optimistic, while

Chinn and Frankel (2005) project a possible large role using econometric estimates. (Ewe-Ghee Lim, IMF, 2006).

Today may be the most interesting debate is being held among Chinn and Frankel (2008) on the one side and Posen (2008) on the other. While the first authors declared that "the Euro may over the next 15 years surpass the dollar as leading international currency", the second author basically answered "why the Euro will not rival the dollar".

# 2. Dollar Depreciation and Emergence of the Euro

# 2.a. The Big Dollar, fluctuations and its depreciation

From 1998 to 2001 the USD's value increased dramatically. However, since its last peak in 2001, there has been a trend towards depreciation. Graph 1 shows two indexes constructed from the spot historical values of foreign exchanges against the USD. Index 1 gives a higher weigh to the Eurozone and other European currencies, while Index 2 is based on trade weighted relations. As observe in the graph the dollar depreciation against the first index is much stronger.



Source: Federal Reserve

Table 1

Index 1	
Euro	57.60%
Yen	13.60%
British Pound	11.90%
CAD	9.10%
SEK	4.20%
CHF	3.60%

Table 2

	2000-	1995-
Index 2	2008	2000
euro	18.0%	19.0%
Canada	16.0%	16.0%
Japan	10.0%	15.0%
Mexico	10.0%	9.0%
China	15.0%	7.0%
UK	5.0%	6.0%
Taiwan	3.0%	4.0%
Korea	4.0%	5.0%
Brazil	2.0%	2.0%
India	2.0%	1.0%
australia	2.0%	2.0%
Hong Kong	2.0%	3.0%
Venezuela	1.0%	1.0%
Switzerland	2.0%	2.0%
S. Arabia	1.0%	1.0%
Malaysia	2.0%	2.0%
Sweden	1.0%	1.0%
Israel	1.0%	1.0%
Russia	1.0%	1.0%
Singapore	2.0%	2.0%
	100.0%	100.0%

What caused the depreciation? The question can partially be explained by looking at the monetary and fiscal policies of the time in the United States. The following paragraphs are taken from the Monetary Policy Report to the Congress:

"The impressive performance of the U.S. economy persisted in the first half of 2000 with economic activity expanding at a rapid pace. Overall rates of inflation were noticeably higher, largely as result of steep increase in energy prices... Because price stability is essential to achieving maximum sustainable economic growth, heading off these pressures has been critical to extending the extraordinary performance of the U.S. economy. To promote balance between aggregate demand and potential supply and

contain inflation pressures, the Federal Open Market Committee (FOMC) took additional firming actions this year, raising the benchmark federal funds rate 1 percentage point between February and May". (Monetary Report to Congress July 20, 2000)

"Last year was a difficult one for the economy of the United States. The slowdown in the growth of economic activity that had become apparent in late 2000 intensified in the first half of the year. Business slashed investment spending...as actual and prospective sales deteriorated, many firms in the factory sector struggled with uncomfortable high levels of inventory, and the accompanying declines in manufacturing output steepened. At the same time foreign economies also slowed, further reducing the demand of U.S. production. The aggressive actions by the Fed to ease the stance of monetary policy... The devastating events of September 11 further set back an already fragile economy... The economic fallout of the events of September 11 led the Federal Open Market Committee (FOMC) to cut the federal funds rate..." (Monetary Policy Report to Congress, February 27, 2002)

The second half of the 90's was characterized by volatility as a consequence of a series of crises. In 1994 took place the Tequila crisis, and after that the Asian crisis followed by the Russian crisis and in the U.S. the Long-Term Capital Management crisis occurred. In most of the cases pegs collapsed and strong devaluations materialized. To diminish the negative impacts on the economy in the second quarter of 1998 the Fed eased monetary policy, naturally there was a short term depreciation of the dollar; however given the fast recovery the increase in output soon led to an increase in interest rates that adjusted the foreign exchange market and the dollar started to appreciate.

From 1998 (4Q) to 2001 the economy really boomed. Growth pace was very fast and unemployment was low. Growth in output was mostly driven by a strong domestic demand and an increase in equity prices. Income grew less rapidly than expenditures, and the personal savings rate declined further, in part the latter was a consequence of the appreciation of home-properties that induced a "wealth effect". Despite the decrease in private savings **government savings were increasing due to a fiscal surplus**. From a Balance of Payment (BOP) perspective, the U.S. was having a Current Account deficit; however since capital inflows in the period were very high the overall BOP seemed sustainable. In addition, given the growth in global demand U.S.' exports were increasing, but due to the wealth effect the marginal propensity to import increased too.

Regarding inflation, there was an increase particularly in the periods with high energy prices. The "core" inflation though, did not increase as much, mainly because the U.S. was importing extremely cheap goods from Asia. However, in the first quarter of 2000 inflation started to accelerate. This moment can be called the "big dollar" period.

From the second quarter of 2000 to 2002 we can observe a deceleration in growth together with a series of shocks that finally led to a collapse in March 2002. The increase in interest rates and the drop in house prices produced a decrease in construction investment. So, the swing in mortgage interest rates as well as the slower growth of income amid a downturn in the stock market where clear signs of deceleration.

Growth in consumer spending slowed while producers were hit by a decrease in domestic and international demand. The tipping point was naturally September 11 which negatively affected sectors like hospitality, tourism, airlines, etc. Soon after the terrorist attacks the Fed injected liquidity by massive cuts in interest rates. At the same time there

was a decrease in tax revenue and a huge fiscal expansion driven by the war in Middle East. As **current account deficit increased enormously**, the government started to have what is known as "twin deficits": current account and fiscal. Even if there is no concluding empirical evidence on the correlation between both, a weak fiscal position may diminish the confidence in a currency and produce a "substitution effect" towards other currencies. As Mankiw said, "as smaller federal budget deficit would be more national saving, less reliance on foreign capital flows, and a smaller trade deficit. The trade deficit and the budget deficit are not twins, but they are cousins". (Mankiw, 2006)

In addition, as theory states, the sharp decrease in interest rates translated into a weakening in the dollar. Since investing abroad provided higher returns the demand for dollar assets decreased causing the USD to depreciate. Given the cumulus of problems, the expectations of depreciation further pushed the dollar down. During the period of monetary easing vulnerabilities were built, such as the extensive increase in mortgage demand and household spending. The excess liquidity provided by the Fed ended up financing junk investments and irresponsible lending as well as borrowing.

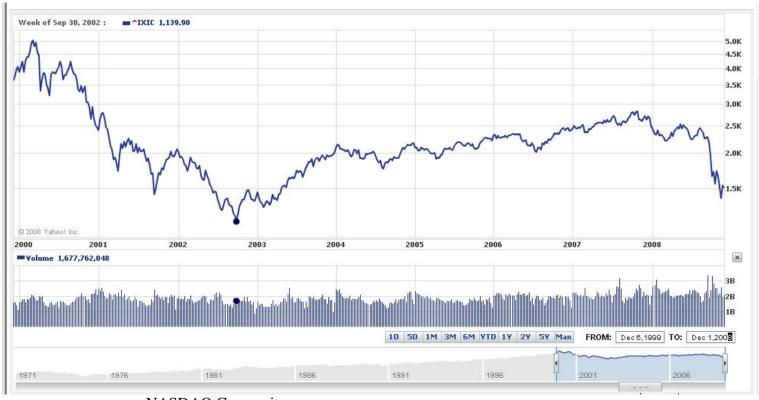
"From the mid-1990s until early 2002, the strength of foreign demand for dollar assets was sufficient to keep the dollar appreciating despite the rapid expansion of the trade deficit in this time period. Since 2002, however, although the United States continued to receive a rising inflow of capital, the strength of the associated demand for dollars has not been sufficient to prevent the dollar from depreciating moderately under the weight of large current account deficits in this time period". (Elwell, 2008)

<sup>&</sup>lt;sup>2</sup> Craig K. Elwell Specialist in Macroeconomic Policy Government and Finance Division. Dollar Crisis: Prospect and Implications. CRS Report for Congress, January 8, 2008

According to Eichengreen (2005), whether the dollar retains its reserve currency role depends, first and foremost, on America's own policies. Serious economic mismanagement would lead to the substitution of other reserve currencies for the dollar. In this context, serious mismanagement means policies that allow unsustainably large current account deficits to persist, lead to the accumulation of large external debts, and result in a high rate of U.S. inflation and dollar depreciation. Clearly, this would make holding dollar reserves unattractive. This is a lesson of British history in the sense that an inflation rate that ran at roughly 3 times U.S. rates over the first three quarters of the 20th century, in conjunction with repeated devaluations against the dollar, played a major role in sterling's loss of reserve currency status.

The depreciation of the dollar meant two types of vulnerabilities: endogenous and exogenous. As Eichengreen argued, there was a risk associated to mismanagement; however, the increasing dependence of the United States on foreign capital flows, particularly flows from countries that were ideological and geopolitical enemies such as China and Middle Eastern economies remained to be the highest vulnerability.

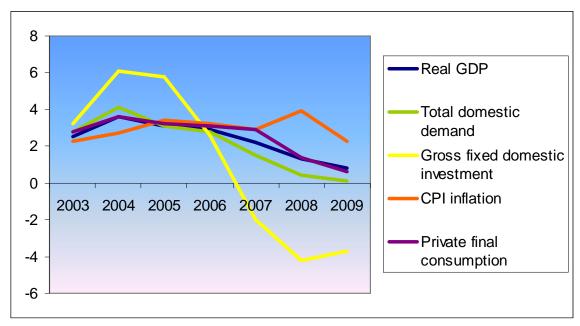
On the other hand there is a huge risk associated to the supervision of the private sector, particularly in the financial arena. Wall Street games tended to create huge industry bubbles that when burst hit the whole economy, and affected the currency. An example was the dot-com bubble. This was a self-perpetuating rise in the share prices of stocks in the technology and communication industries. Speculations led to overvaluation of internet companies. The stock market plunged in March 2002 when the share prices fell dramatically, and many companies went out of business. It was the end of the dot-com bubble, companies that were too big to fail such as Enron collapsed.



NASDAQ Composite

After its sharp collapse the dollar rebounded in 2005, but soon after it continued its downward trend, particularly vis-à-vis the Euro. "The broad appreciation of the US dollar, the stability of the euro and the overall downward trend of the yen were the salient developments in foreign exchange markets over most of 2005. Until December, the dollar appreciated markedly against the euro, the yen and a number of other floating currencies, in particular the pound sterling and the Australian and New Zealand dollars. Its trend vis-à-vis emerging markets' currencies was less uniform. Asian currencies remained fairly stable or depreciated, while some Latin American currencies strengthened. Starting in December 2005, the upward trend of the US dollar reversed". (BIS 76th Annual Report)

Several factors, centered in the US policy, may explain the depreciation of the dollar, however, it is also important to consider policy making in the rest of the world to explain these trends as well as variations. In addition, it is crucial to analyze how changes in expectation precipitated the depreciation. Broadly, it can be said that the expectations for an increase in interest rates in both Europe and Japan combined with the expectations of depreciation in the dollar, steepened the decrease in the value of the US dollar. China was also announcing an appreciation in the renanmbi against the USA, which further contributed to the downward trend. Besides, the increase in commodity prices buttressed expectations of lower growth in the United States.



United States: Fundamental Indicators

Source: IMF

In the U.S. the increase in the current account deficit remained worrisome as well as the amount of government expenditures. Uncertainty grew given the developments in Middle East and the associated higher energy prices that were pushing up inflation, and due to the devastating effects of hurricanes. In the end the Fed started increasing interest

rates due to inflation expectations, as a consequence both the housing and motor vehicles markets cooled. By the beginning of 2005, the reduction of interest rates gave a break to the depreciation of the dollar and caused a small rebound. To offset the current account deficit, there were capital inflows through the financial account. Most of the foreign official inflows were from Asian economies that were purchasing government bonds and mortgage backed securities from Fannie Mae, Freddy Mac and Ginnie Mae.

In Europe the ECB, tightened the monetary policy in the second quarter of 2005 to cope with inflation expectations. Real GDP in the Euro area accelerated primarily due to an increase in consumption spending, employment and investment. However, greater energy prices were producing an increase in core inflation above the ECB's target. So monetary tightening was much stronger than in other regions. In this period ECB could conduct a monetary policy based on predictability, hence, expectations tended to reinforce policy goals. Therefore, the Euro appreciated more than other currencies

Finally, the current account surpluses in many emerging economies further increased the appreciation of these currencies against the dollar. Nonetheless, the current account surpluses, particularly in Asian economies, allowed for the accumulation in foreign reserves mostly dollar denominated that cushion an even stronger depreciation of the dollar.

Summing up, a variety of causes explained the dollar depreciation, but the most important reasons were: A loose monetary policy adopted by the Fed; a loose fiscal policy, there was a decrease in tax collection and a massive increase in spending towards national security issues; a current account deficit that seemed to increase without control; volatility in the stock market, mostly associated to the dot-com bubble burst; and, the

emergence of a strong Euro as a competitor for portfolio diversification and debt denomination.

## 2.b. The growing role of the Euro

On 1 January 1999 eleven E.U. Member States – Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland – adopted the European Union's single currency, the euro, in what may be considered to be the world's most radical monetary reform since Bretton Woods. This move established the second largest single currency area in the world (after the United States), which now produces two thirds of the E.U.'s GDP and one fifth of the world's. Four other EU Member States have joined the euro area since its inception: Greece in 2001, Slovenia in 2007 and Cyprus and Malta in 2008. The area is set to expand further as most EU Member States currently outside the euro area are preparing to join at some point in the future. (European Commission, 2008)

As a result of the provisions expressed on the Maastricht Treaty of 1992, in 1999 the Euro was adopted. In order to be part of the "Eurozone" members should met monetary and budgetary requirements. The most important conditions included a budget deficit of less than 3% of GDP, low inflation rates that tended to converge to the overall average, and a debt to GDP ratio lower than 60%. In addition, they had to realign their exchanges. Therefore, it is clear that macroeconomic stability and healthy financials was one of the crucial goals of the European Commission. Unlike the loose fiscal and monetary policies that were being implemented in the United States, the European counterparts were converging towards economic discipline. This search for stability and discipline not only provided credibility to institutions but also was crucial in order to coordinate policies.

Budgetary discipline has been reinforced by the Stability and Growth Pact (SGP), which was reformed in 2005. According to the European Commission (2008) there was an impressive consolidation of fiscal policy. This allowed for a reduction in fiscal deficits to 0.6% of GDP in 2007. In fact ten members, including Germany, either recorded a budget surplus in 2007 or were very close to balance. While not fully eradicated, procyclical fiscal policies have also become less common. Unlike monetary policy, fiscal policy remains in the hands of member states, therefore proper coordination is always a challenge. The lack of a centralized fiscal policy is one of the major vulnerabilities of the European system in crisis management situations.

		Period averages					
		Euro area		Denmark, Sweden, UK		United States	
		1989-1998	1999-2008	1989-1998	1999-2008	1989-1998	1999-2008
Real GDP	% rate of change	2.2	2.1	2.0	2.7	3.0	2.6
Real GDP per capita	% rate of change	1.9	1.6	1.7	2.2	1.8	1.6
Real GDP per capita	index, US = 100	73	72	74	76	100	100
Employment	% rate of change	0.6	1.3	0.1	0.9	1.5	1.0
Labour productivity	% rate of change	1.6	0.8	1.9	1.8	1.5	1.6
Unemployment	% of labour force	9.3	8.3	7.9	5.2	5.8	5.0
Inflation	%	3.3	2.2	3.4	1.7	3.3	2.8
Fiscal balance	% of GDP	-4.3	-1.7	-3.6	-0.9	-3.3	-2.5
Gross public debt	% of GDP	68.6	68.6	48.7	43.0	67.8	60.7
Long term interest rate	%	8.1	4.4	8.6	4.9	7.1	4.8
Real long term interest rate	%	4.7	2.4	4.2	3.3	4.3	2.4

Monetary discipline was implemented to pursue an inflation target of 2%. Consequently there was a convergence to low inflation rates. However, inflation has increased due to a boom in commodity prices.

In these past years the Eurozone succeeded in constructing an environment of macroeconomic stability and low interest rates. This together with the creation of the Structural Cohesion Funds has ensured the conditions for an accelerated catching up of new member states.

All these changes fostered financial markets integration. Interbank money markets have reached full integration and cross-border transactions have been increasing. Also, the disappearance of exchange risk and lower cross-border transactions costs has helped to further increase product integration. In the same line this decline in risk premiums allowed for an expansion of capital formation to 22% <sup>3</sup> of GDP.

Macroeconomic stability seeded the ground for an increase in the international role of the Euro. The external position was in balance, there were credible institutions and macroeconomic framework as well as a sound financial system. Hence, the euro area has been contributing to an orderly evolution of the global economy.

The introduction of the new currency was not easy. Soon after it was launched the Euro depreciated in the exchange rates market. In particular, the Euro fell strongly against the USD. From an introduction at USD1.18 per Euro, the currency depreciated to a low of \$0.8228/€ on October 2000. Once European institutions, in particular the European Central Bank, started to gain investors' confidence and the economy of the region started to grow the currency began steadily appreciating. By July 2002 it gained parity versus the USD, and after it appreciated against it. On 2003 the Euro surpassed its initial trading value.

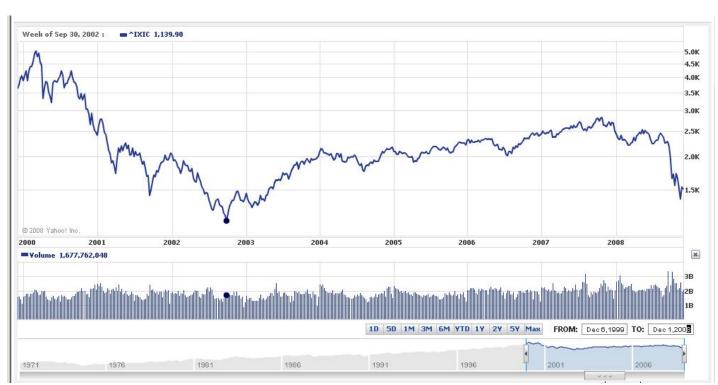
While the Euro was appreciating the USD was depreciating vis-à-vis other major currencies, however the depreciation against Euro and GBP were by far the strongest. Hence, it represented not only the trend of a USD depreciation related to America's monetary and fiscal mismanagements, but also the trend of a Euro appreciation that resulted from predictable ECB's policies. In November 2005 the euro again began to rise

 $<sup>^{\</sup>rm 3}$  Data taken from European Commission Report. "10 years of the Euro". 2008.

steadily against the U.S. dollar, and on July 2008, the euro rose to an all-time high of \$1.5990 (€0.6254/\$).

"The figures suggest central banks diversified out of the dollar as it fell to the lowest level in a decade. Investors sold a record amount of U.S. securities in August when defaults on subprime mortgages rippled through financial markets and the Federal Reserve signaled it would cut interest rates. "The dollar seems to be losing, at least to some small extent, its favored status," said David Powell, a currency strategist at IDEA global in New York. "Foreign central banks aren't necessarily shunning dollar assets, but they were more attracted to other currencies." <sup>4</sup>

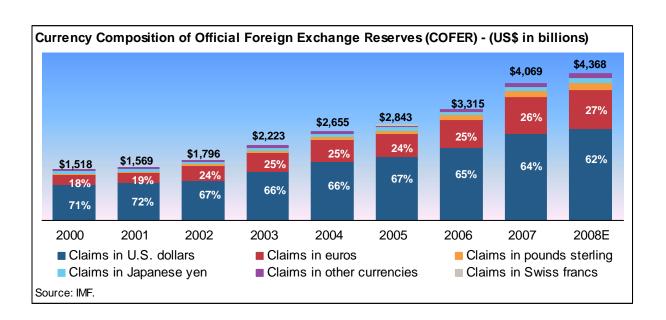
## EUR/USD



Source: Yahoo-Finance

<sup>&</sup>lt;sup>4</sup> Bloomberg Dec. 2007.

Clearly, governments have been increasing their holdings in Euros. While the percentage of USD reserves has been falling since 2005, there has been an increase in the percentage of claims in Euros. In fact from 2000 to 2008 there has been a 9% raise in disclosed reserves. During the past years emerging countries has been running current account surpluses and accumulating international reserves. The increase in foreign exchange reserves has been growing at an accelerated pace. Essentially this responded to a boom in commodity prices together with an increase in the Chinese demand. Also, many Asian countries need to allocate surpluses in foreign reserves to avoid an appreciation of their currencies.



Many scholars think that being the main currency of reserve gives an extremely high segniorage privilege. "If the dollar loses part of its reserve status, this would reduce the <<exorbitant privilege>> of the United States, which is able to finance large and prolonged current account deficits in its own currency and to maintain higher returns on

its foreign currency assets that foreigners achieve on their dollar assets" (Papaionnou, Portes, 2005)

The Euro's role as a trade invoicing or settlement currency has also risen. It has become more than 50% of the euro area's external trade and 60% of trade in third countries that are either neighbors or candidates for membership. It also plays an important role as an anchor or reference currency in the managed exchange rate regimes of about 40 countries. The Euro has become an anchor currency for countries like Cape Verde or Bosnia and Herzegovina. 23 states and territories have currencies that are directly pegged to the euro including 14 countries in mainland Africa, 2 African island countries, 3 French Pacific territories and a Balkan country.

A significant market in euro-denominated private-sector bonds has emerged, with an annual gross issuance of more than €1 trillion now substantially exceeding the approximately €800 billion raised through public sector issuance. Equity markets too have integrated faster than elsewhere, with the share of equity held in other euro-area countries rising from 20% to 40%. Financial markets infrastructure has advanced and progress has been made in cross-border wholesale financial services, while the Single Euro Payments Area is set to eliminate differences between national and cross-border transactions achieved via the implementation of the Financial Services Action Plan and the operation of the Lamfalussy committees. 6

It is very important to open a parenthesis and make a reference about the United Kingdom (U.K.). As it is globally know, the U.K is not part of the Eurozone. However, London has been the financial center that has allowed for the expansion of the Euro in the

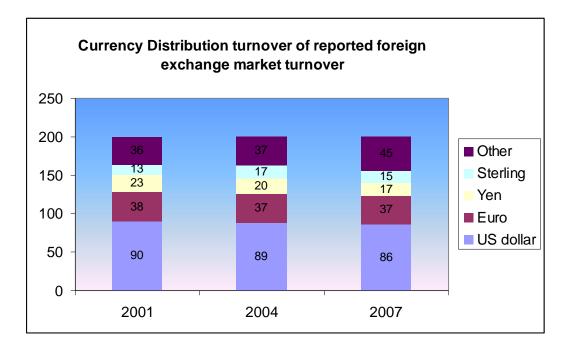
<sup>&</sup>lt;sup>5</sup> Idem.

<sup>&</sup>lt;sup>6</sup> Idem.

foreign exchange market. Most of the projections on the "Euro v.s USD as the future international currency" as well many European scholars have emphasize that if the U.K. becomes part of the Eurozone, soon after the Euro would be able to surpass the dollar.



Source: IFSL



Source: BIS

Will this crisis force London to the Eurozone or will the U.K. tend to isolate? In the opinion of Wolfgang Münchau the U.K. may love the Euro as a result of: 1) Longterm economic costs; 2) The City has managed to remain the Eurozone's financial centre, even though the UK is firmly outside. We should not take this situation for granted. The transaction-based system of financial capitalism suited London better than Frankfurt or Paris. Regulatory revenge will push offshore activities back onshore and the relative attractiveness of the City of London will be correspondingly reduced. The UK will at some point have to make a choice whether it wants to be in the Eurozone or whether it wants to seek an alternative use for those rather tall buildings in the heart of London; 3) Political economy. There will be more economic governance at Eurozone level in the future. 4) The UK's macroeconomic policy framework may simply not survive this crisis. There must now be a risk of a real sterling crisis at some point, something significantly more alarming than the tremors felt last week. As Willem Buiter noted the UK is in many respects comparable to Iceland. It is bigger of course, but still tiny in relation to the global economy, with a sick financial sector that accounts for several times gross domestic product.<sup>7</sup>

 $<sup>^7</sup>$  Wolfgang Münchau. Why the British may decide to love the euro. Financial Times. Published: November 16 2008 18:12 | Last updated: November 16 2008 18:12

# 3. Financial Crisis and Dollar appreciation: Going Green?

"The financial turmoil began in the market for US subprime mortgages, and the markets for structured products based on them. Delinquency rates in the subprime market had started to rise in early 2005, almost contemporaneously with outright declines in house prices, but there was no significant market response to this development until early 2007. Credit spreads on such products then began to widen, rating downgrades increased, and the process accelerated sharply in August. The trigger...was the decision by a small number of investment funds to freeze redemptions, citing an inability to value their complex assets. From this small beginning, the financial disruption then fanned out to virtually every corner of the system. By early August, a combination of growing concerns about the valuations of complex products, liquidity risk and counterparty risk had led to a host of other markets being negatively affected. There was an effective collapse of the market for structured products based on mortgages, a massive withdrawal of investors from the asset-backed commercial paper market, and a sudden drying-up of interbank term money markets in the major currencies. This last development manifested itself in the form of an unprecedented gap between expected policy interest rates (over a one- to three-month horizon) and the rates at which the largest banks were prepared to lend to each other. While it was almost inevitable that difficulties in the subprime market would eventually have some repercussions for the financial institutions at the centre of this market, the force and speed of the impact took virtually everyone by surprise." (BIS, 78<sup>th</sup> Annual Report)

The present financial crisis developed in different phases. From a balance sheet perspective, the first phase was related to a decrease in the value of the assets. In fact, delinquency and defaults in mortgage payments led to a decrease in the value of assets attached to the mortgage business. Then, on the liability side banks had a constraint in

financing, basically given the lack of transparency, panic and the increase in counterparty risk banks did not want to lend to each other. Most financial institutions tried to raise capital from funds in Middle East and Asia. However when the value of equity dropped, the credit squeeze turned into a credit crunch.

From a policy making perspective the response and the grade of intervention of the Fed can also be divided into different phases. When the ABX-HE indices fell, the markets dried. Panic soon led to volatility. The Fed found itself in a huge dilemma. It could low the interest rates in order to inject liquidity to help banks, it could also intervene but this could increase the moral hazard linked to any bail out. Moreover, any cut on interest would create inflation in the future. In the end, the Fed started to decrease the rates. Then it provided a "term auction facility" to loan commercial banks. The second phase implied its direct intervention to "save" Bear Stearns in March 2008. The Fed announced it would lend JP Morgan \$29 billion in a non recourse loan collateralized with some assets of Bear Stearns. In addition the Fed created other "term securities lending facilities" for investment banks. The third phase was the application of "good" bank v.s. "bad" bank logic<sup>8</sup>, and was implemented when it let Lehman Brothers fall. Apparently, the idea behind was to reduce moral hazard and also allow for bad assets to emerge. At the same time on September the Federal Housing Finance Agency (FHFA) put Fannie Mae and Freddie Mac under conservatorship. This led to the fourth phase: government intervention to carry the burden of bad assets and "clean" the system. Finally, the Secretary of the Treasury announced the "Troubled Assets Relief Program" (TARP), by which the Fed would inject liquidity by taking capital position. The first company was AIG,

<sup>&</sup>lt;sup>8</sup> The same logic was applied in other crises, in other countries. For example in the "Northern crisis" in Europe. (International Banking class notes)

soon most of the big banks received capital. As we can observe the crisis went from the asset side to the liability side and the solution from the liability side to the asset side. The final phase was related to global action, this means the action of joining the authorities of main Central Banks to find a global solution and implement new standards for supervision.

The U.S. dollar reached a bottom in mid July and then started to rebound. The latter seemed an anomaly in the context of a crisis. The first rebound was a direct consequence of the liquidity crunch. Since banks were not lending to each other, money demand (US dollars) exceeded money supply, hence the price of the dollar went up. Many argue that this is wrong because in theory this would have increased interest rates and the Fed Funds (FF) rate has decreased. Nonetheless, since there has been a "brake down" in the pass-through from economic policy to the real functioning of the economy we should observe not the FF rates but the interbank rates. During this period Libor rates increased dramatically so as the gap measured by the TED spread. Therefore, I would argue that there is a rationale behind this first dollar rally that is consistent with the theory; however, I believe that a long-term appreciation would damage the United States' economy since it will impede a current account deficit correction. During the "Black September" the dollar fell again due to the accumulated volatility (Lehman Brothers, Merrill Lynch, AIG, Ginnie, Freddy, Fannie). Then in October and after the TARP became law (HR 1424, Emergency Economic Stabilization Act of 2008) the dollar rebounded again. So, why people were going green? A) The US dollar appears to be the safest asset in the middle of the crisis because of credibility of American institutions; B) because most other countries had dollar denominated claims (and would be an extremely bad deal if the dollar depreciates); C) because apparently the U.S. will "reach" the bottom first and get out of the crisis first, and Europe will not be fast enough to coordinate its

response (particularly fiscal); D) because of short-term covering; E) because the U.S. has the "money printing machine" at home. Many of these arguments have been presented in the last few days; some are simply based on speculation. Many reasons have been presented. But I think that the question is: what is the risk of going green?

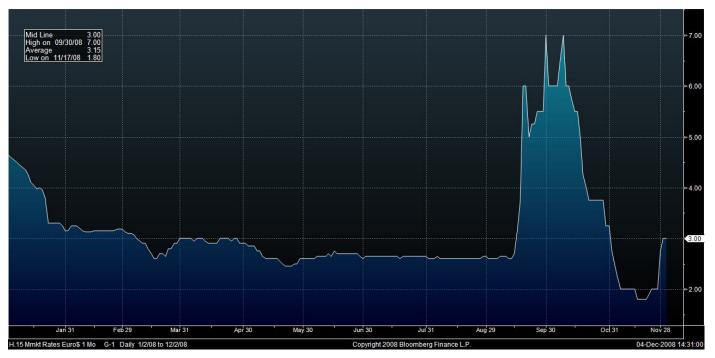
For the period 2002-2007 we observed a depreciation of the US dollar. A massive depreciation was cushioned by what Ben Bernanke called "the global savings glut". Many scholars were calling for a "soft launch". The crisis, led to a fast appreciation of the dollar that is barely linked to the fundamentals of the economy. In theory, and as discussed above, a decrease in interest rate would led to a depreciation of the currency. It is true that most governments have been easing; however, the percentage change in rates has been much higher in the US. The increase in money supply was also accompanied by a gigantic fiscal expansion. Even after the colossal input of liquidity and the expansive fiscal policy the expected change in output remains low. Since the increase in output is weak the force that would truly lead to a currency appreciation is fragile. On the other hand, the appreciation of the dollar makes the economy less competitive vis-à-vis other countries and therefore is not allowing for a correction in the current account deficit. Hence, net exports will remain negative. The two things that are actually narrowing the current account deficit are the decrease in growth a therefore a decrease in the marginal propensity to import (as consumption has contracted) and the reduction of commodity prices.

To conclude with, we have a country with a huge fiscal deficit, a current account deficit, low future output with loose monetary policy but a probable increase in private savings. The described situation is similar to that of 2002, however, in 2002 the dollar

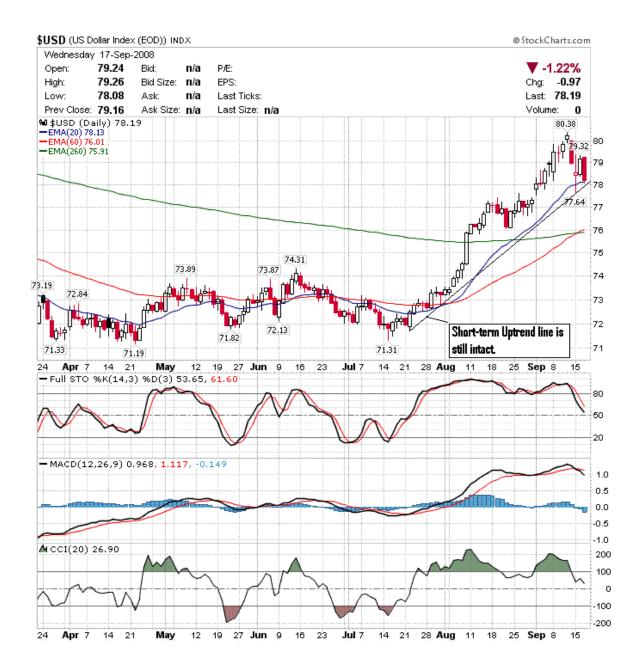
depreciation started to allow for a gradual correction in imbalances; now, the appreciation of the dollar is not allowing for that correction. The biggest risk is to have a dollar crisis; this is a massive depreciation in the future. Along with this, when prices adjust, the increase in money supply would generate inflation, unless of course, the US ended up consuming massive amounts of cheap Chinese goods. The latter makes the American economy doubly dependent. First, in order to finance its fiscal efforts the government will need Asian economies to buy US assets. Second, to maintain inflation low the government will keep importing goods and widened the current account deficit. This will basically be a revival of what Robert Triffin noticed was occurring in 1960. Triffin noted that if the U.S. failed to keep running deficits the system would lose its liquidity, not be able to keep up with the world's economic growth, and, thus, bring the system to a halt. But incurring such payment deficits also meant that, over time, the deficits would erode confidence in the dollar as the reserve currency created instability. Also, if it is true that the US will be the first country to recover from the crisis, most of that recovery may be led by an increase in consumption. If consumption increases and the dollar price remains high then the propensity to import will be enormous and the current account deficit will further wider. So, even if the US could run a current account deficit for 20 years more (theoretically there is nothing bad against a current account deficit) the economic cost and the political cost of dependence could be too high.

<sup>&</sup>lt;sup>9</sup> Triffin, Robert." Britannica Book of the Year, 1994. Encyclopædia Britannica Online. 6 Apr. 2006 <a href="http://search.eb.com/eb/article-9113363">http://search.eb.com/eb/article-9113363</a>>.

TED Spread 2008



Source: Data Stream – Bloomberg



Source: Stock Charts

What happened on the other side of the Atlantic? At the begging of the crisis European leaders expressed that the current financial crisis was an "American" crisis. They seemed to be reluctant to accept that the turmoil would eventually affect them. Today, their involvement is not an option. It has been clearly understood that the current crisis is a global one. Therefore, global solutions are needed.

Europe's coordinated rescue efforts have for now prevented more serious disruptions in the financial sector. Different European Governments have been injecting capital since late October 2008 and have also guaranteed banks' liabilities until the end of 2009. Despite these measure coupled with the recent announcement by the Bank of England and the European Central Bank to cut rates further, based on Credit Suisse research data, banks left 240 billion euros on deposit with the European Central Bank (ECB) last Friday illustrating that "the new measures are succeeding in supplying liquidity to the system, but that banks are hoarding cash rather than lending it to each other". 10

The German financial rescue plan announced in October reached nearly €500 billion or close to 20% of Germany's GDP. The Government announced that approximately 80% of the funds will be directed to a federal fund to provide banks' loan guarantee, while the remaining €80 billion should be used to recapitalize banks and, if necessary, buy risky assets.

France's plan totaled €360 billion or just below 20% of GDP with €320 billion to guarantee new debt issued by banks while €40 billion is expected to be injected in a second fund used for bank recapitalizations. According to a report released by Credit Suisse, the difference between the German and French plans is mainly on the funding

<sup>&</sup>lt;sup>10</sup> Credit Suisse. Euro area and UK Economics: Call it unconventional. (December, 2008)

side. One of the important aspects of the French plan is that banks will have to pledge credits to the private sector in exchange for cash.

The French government has announced that six banks will be receiving capital to strengthen their balance sheets for a total of €10.5 billion by the end of this year, using roughly a quarter of the fund's available cash. The investment is expected to take the form of subordinated debt with a return of 400 basis points above the risk-free rate. These banks have agreed on a plan to provide for a "3 to 4% increase in lending to companies, households and local governments."

The Italian Treasury also announced the launch of a fund, the emergency stabilization fund, to provide loans to banks to ease liquidity stresses. The Italian Government has also announced plans to inject capital in banks deemed under-capitalized by the Bank of Italy thought no further actions have been taken since the announcement.

Finally, the Spain's package amounts to around 13% of GDP and includes a fund to buy assets from banks and a guarantee for new bank debts and is expected to provide the option of capital injections directly into banks with below par capitalization.

BNP Paribas has also won European Union approval to buy the Belgian and Luxembourg banking arms Fortis while Government bailouts for Fortis given by Belgium, the Netherlands and Luxembourg in September and October are expected to be cleared in the next few weeks. In October, BNP Paribas became the largest holder of private savings in the 15-nation euro area when it agreed to acquire most of Fortis assets a week after a state rescue failed to keep the bank afloat.

<sup>&</sup>lt;sup>11</sup> Credit Suisse. ECB Watch Giant leap or small step? Research Report. (December, 2008)

UBS shareholders', which suffered the most in the U.S. subprime contagion, have voted in favor of government funds amid rising concerns and increased fears of a deepening recession. Approximately 98% of UBS' shareholders voted in favor of the creation of conditional share capital for the issuance of mandatory convertible notes in the amount of CHF 6 billion to the Swiss Confederation. The news followed reports that former UBS executives have returned as much as 70 million Swiss francs (\$58.3 million) in bonuses after the company posted a record loss that is forcing the bank to take additional aid from the government. The Swiss Government agreed to say it will provide UBS with loans up to \$54 billion, in addition to infusing capital in the European bank. In return, the bank will allow the government to own a 9% stake in collateral.

There has also been a response from the European Central Bank by increasing capital markets liquidity. First, the ECB enlarged the provision of liquidity at its regular weekly main refinancing operations in October. Second, the ECB is more extensively using open market operations that were rarely adopted before. Third, the ECB reduced the corridor of standing facilities from 200 basis points to 50 basis points and 100 basis points to 25 basis points around the interest rate of the MROs. This implies that the marginal lending rate is now set at 4.25% and the deposit rate at 3.25%. Fourth, since December 2007, the central bank is providing US dollar liquidity to euro area banks on behalf of the Fed against ECB eligible collateral. As President Trichet indicated, "counterparties in these operations will be able to borrow any amount they wish against appropriate collateral in each jurisdiction. This is a "world premiere" in exceptionally confident cooperation between central banks."

More recently, the European Central Bank has announced a 75 basis points cut to 2.50% on their target rate; the boldest change so far in the ECB's history and following an unexpected 175 basis points cut of the Swedish Riksbank and a 100 basis points cut by the Bank of England. The Swedish Riksbank has reached 2% and has explicitly stated that it intends to remain at that level.

These unprecedented events have combined to create an extremely volatile environment and contributed to a steep depreciation of the Euro relative to the U.S. dollar. After reaching its peak in July 2008, the Euro as well as the British Pound have consistently fall against the U.S. dollar. The Sub Prime Crisis that many we believe started in June 2007 gave the United States a leg up and allowed the country to start tightening economic policy earlier than its European counterparts. Thus, expected rate cuts in the Euro zone have contributed to a depreciation of the Euro currencies. From another perspective, there were significant leveraged positions against the U.S. dollar than had to be settled, again increasing the demand for this safe heaven security. Despite early expectations that the crisis would not reach Europe, investors have changed their views after the collapse of Lehman Brothers in October 2008 and have searched for refugee in what they believe are "low risk" securities, i.e. the U.S. dollar.

There are still three main challenges for Europeans to face a crisis of this magnitude. On the one hand, each country preserve its own fiscal policy, hence a coordinate counter-cyclical action is very difficult to be implemented. The crisis has shown that the monetary stimulus is not enough to bring the economy back. Therefore, unlike America where the Federal government manages the fiscal policy for all states European individual policies could damage the overall regional recovery. On the other

hand potential growth remains extremely low in Europe. Productivity growth has decline from 1.5% in 1990s to less than 1%. The Euro area per capita income is lower than in the US. All these show that Europe will need more time to recover from a crisis than the American counterpart. Finally, European banking system is still fragmented. Europe will have work towards better regulations of the banking system at the national level and also at the regional level. Standards related to cross-border risks management should be discussed in Brussels. David Mayes from the Bank of Finland said there is still too much scope for supervisory discretion at the country level. He called for a more rules-based system of prompt corrective action, which could give authorities in one country more confidence that other country authorities' would intervene into a troubled bank relatively early and take it over before its capital is depleted... Even though views differed on specifics, most people agreed that the E.U.'s 27 member countries and Europe as a whole must be better prepared to prevent, manage, and resolve bank failures. And no one doubted that the current crisis would lead to a questioning of the very foundations of modern finance. (IMF, 2008)

	United States	Euro Area <sup>1</sup>	United Kingdom <sup>1</sup>	Other <sup>1</sup>
9/14/2008	Federal Reserve expands eligible collateral for Primary Dealer Credit Facility and Term Securities Lending Facility (TSLF), increases frequency and size of schedule 2 TSLF auctions, and eases restrictions on transactions between banks and broker-dealers			
9/15/2008	\$70 billion overnight repos	€30 billion overnight repos	£5 billion 2-day repos	Other central banks provide liquidity, including Japan (¥1.5 trillion) and Australia (A\$2.1 billion), among others
9/16/2008	Federal Reserve extends \$85 billion 2-year credit line to AIG; \$50 billion overnight and \$20 billion 28-day repos	€70 billion overnight repos	£20 billion 2-day and £5 billion 3-month repos	Other central banks provide liquidity, including Japan (¥2.5 trillion), Switzerland (SF726.4 million) and Australia (A\$1.7 billion), among others
9/17/2008	Treasury announces supplemental financing program for Federal Reserve, and auctions \$40 billion special cash management bills	€150 billion 7-day repos	Bank of England (BoE) extends Special Liquidity Scheme	Other central banks provide liquidity, including Japan (¥3 trillion), and Australia (A\$4.3 billion), among others
9/18/2008	Federal Reserve expands its temporary reciprocal currency arrangements by \$180 billion with major central banks, and conducts \$5 billion 14-day and \$100 billion overnight repos; Treasury auctions \$60 billion for supplemental financing program	€25 billion overnight and \$40 billion overnight repos	\$14 billion overnight and £66 billion 7-day repos	Other central banks provide liquidity, including Japan (¥2.5 trillion), Switzerland (\$10 billion), and Australia (A\$2.8 billion), among others
9/19/2008	Federal Reserve announces plan to loan banks funds to buy asset-backed commercial paper (ABCP) and buy agency discount notes (DN) outright; Federal Reserve purchases \$8 billion agency DNs and conducts \$20 billion in 3-day repos; Treasury proposes \$700 billion troubled asset resolution program, announces guaranty program for money market funds, and auctions \$60 billion for supplemental financing program; Securities and Exchange Commission (SEC) tightens restrictions on net short positions on financial stocks	\$40 billion in 3-day repos	positions on financial stocks; BoE conducts \$21 billion in 3-day repos	Other central banks provide liquidity, including Japan (¥3 trillion), Switzerland (\$10 billion), and Australia (A\$1.9 billion), among others; several regulatory institutions impose restrictions on equity short sales
9/22/2008	Federal Reserve conducts \$20 billion in overnight repos	European Central Bank (ECB) conducts \$25 billion 28-day repos	BoE conducts \$26 billion repos	

	United States	Euro Area¹	United Kingdom <sup>1</sup>	Other1
9/23/2008	Federal Reserve conducts \$20 billion in 28-day repos and purchases \$2 billion in agency DNs		BoE conducts \$30 billion repos	
9/24/2008	Federal Reserve expands its temporary reciprocal currency arrangements to Australian and Scandinavian central banks; conducts \$25 billion in overnight reverse repos	€50 billion 84-day repos	BoE conducts \$30 billion repos	
9/25/2008	Federal Reserve conducts \$22 billion in overnight reverse repos		BoE conducts \$35 billion repos	
9/26/2008	Federal Reserve conducts \$26 billion in 3-day reverse repos; purchases \$4.5 billion agency DNs		BoE conducts \$10 billion overnight repos and \$30 billion 7-day repos	
9/28/2008		Fortis partly taken over by governments of Belgium, Netherlands, and Luxembourg via €11.2 billion bailout package for 49 percent ownership stake; Germany organizes a €35 billion credit line for Hypo Real Estate	Bradford & Bingley (B&B) nationalized; Santander to pay £612 million for B&B's branches and deposits	
9/29/2008	Federal Reserve increases swap lines to foreign central banks from \$290 billion to \$620 billion, increases the size of the 84-day Term Auction Facility (TAF) auctions from \$25 billion to \$75 billion, introduces forward TAF auctions	ECB conducts €120 billion 38-day repos	BoE conducts \$10 billion repos	Iceland's government takes 75 percent stake in Glitnir Bank
9/30/2008	Federal Reserve conducts \$20 billion 28-day repos	Irish government guarantees all deposits, covered bonds, senior and dated subordinated debt (until September 2010); Dexia receives €6 billion infusion from Belgian and French governments and main shareholders; ECB conducts €190 billion 7-day repos	BoE conducts \$10 billion repos	
10/1/2008	Federal Reserve conducts \$20 billion overnight reverse repos		BoE conducts \$7.5 billion overnight repos and \$13.4 billion 7-day repos	
10/2/2008	Federal Reserve conducts \$25 billion overnight reverse repos	Greek government guarantees all bank deposits	BoE conducts \$8.9 billion repos	Brazilian central bank eases reserve requirements

Source: IMF

## **Some Thoughts**

During the past six years many scholars doubted about the sustainability of the U.S. twin or "cousins" deficits, in terms of Mankiw. In theory there is no reason why a country cannot run a current account deficit as long as it receives enough capital flows. What has been pointed out is that the rate of increase in flows was weaker than the pace of increase in both current account and fiscal deficits. The current crisis implies a huge fiscal effort since the pass through from monetary policy to output present a similar situation to that called "liquidity trap". The fiscal effort will naturally widen the U.S. deficit. However, the U.S.' private savings (even if they are expected to grow) are not enough to finance this increase while public tax collection is expected to decrease. In this regards, the U.S' rescue plan depends on Asia and Middle Eastern savings; mostly Asian savings due to the decrease in oil prices. Is there a market for new bonds if low interest rates should mean that investing in the U.S. is less attractive? The paradox is that getting out of the crisis depends on a further increase in global imbalances. In theory it could work, in practice I think it may be politically difficult for emerging countries with vast poor majorities to keep financing the developed world expenditures. And for the U.S. it will be increasingly costly too, in both political terms and economic terms. A dollar appreciation will further increase the U.S' economic difficulties.

The United States not only has more resources than the European Union it can implement polices in a more homogenous way. European countries will always be submerging in a dilemma between what is better for the nation and what is better for the Union. Hopefully, good policy coordination would match both. However, in times of crisis this is more difficult. Also, even if many macroeconomic fundamentals converged,

each member is different and the system needs to be flexible enough to allow for some diversity in policy making. In this sense, efficient and coordinated (not equal) fiscal policy is among the greatest difficulties that Europe will need to face. In particular, because monetary policy –one of the major successes of the Union– is not enough to solve the crisis. According to Alesina and Tabellini (2008) monetary policy alone is not enough to support aggregate demand. Investment and consumption decisions are being postponed throughout the world, squeezed by the credit crunch and by self-fulfilling and hopefully overly gloomy expectations of a major contraction. Aggregate demand needs to be sustains by fiscal policy. The EMU's fiscal policy coordination mechanisms are more in flux and under pressure than desire, the crisis promoted the decision to relax the target to balance budgets by 2010 - at least for France and Italy. This type of decision should have implied at least a brief discussion within the members first, before its announcement at the national level.

In addition, a huge effort should be directed to buttress the banking system and cross-border financial transactions. There is no doubt that better regulation is needed specifically regarding risk management, derivative products and financial institutions in general.

While the "pre-crisis monetary and fiscal policies" were much sound in Europe than in the U.S, slow growth and weak productivity are still major vulnerabilities. The strength of consumption in Europe is also weaker than in the U.S. On the whole, this means that the recovery capacity of Europe is lower. In part, this contributes to explaining the recent dollar rally. However, the European external position is "healthier" to that of the United States. In this sense, given that many countries, including Germany,

have been running current account surpluses there is less dependence on external financing.

So, will the Euro surpass the dollar? After this crisis I believe that the dollar price will tend to increase, with strong fluctuations, at least for the next months. Historically, the increase in the dollar price coincides with an increase in reserve accumulation on that currency. After both sides of the Atlantic adjust (2009-2010) it is possible that a 60% USD holding and 28 % EUR will coexist with a major increase in "other currencies" holdings. Also, we have to keep in mind that a huge amount of foreign exchange holdings is not disclosed. So most econometric models that are based on this variable are subject to incurred in gross errors when forecasting scenarios.

Subsequent to the crisis most voices called upon more regulation. However, the system certainly does not need more. It needs a different approach. Markets change too fast and regulations adjust too slowly. The first transformation should be to cover this gap. Global regulation should be flexible enough to be applicable to different geographies and to different times. The new framework should not only cover the banking sector but financial institutions as a whole. It is crucial to reach a fast adjustment that can cover the emergence of new products and actors such as derivatives, special purpose vehicles, etc. New standards to assess systematic risks are needed as well as a complete revision of the rating systems. Also transparency regarding sources of funding and leverage limits is needed. It is true that better regulations are necessary. Though, I strongly believe that government should focus, first, on how the crisis will impact on the structure of the financial system particularly in a situation of information asymmetry. And, second, on

the foreign exchange market as a tool to face further imbalances, which implies controlling competitive devaluations.

All major crisis represent pain and challenges but also huge opportunities to bring positive changes. It depends on our leaders to pursue the creation of enhanced institutions and ensure the lifestyles of their populations. Crisis need fast and pragmatic responses, however, this should not mean shortsighted solutions.

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