THE DOLLAR AND OIL

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Executive Summary

- Confidence in the dollar as the world's primary currency is not waning. Interest rate differentials between currency zones, relating to different phases of the business cycle, have caused short-term dollar denominated capital to convert to other currencies and lowered the dollar's foreign exchange value.
- High oil prices are putting pressure on the economy and indirectly on the dollar by prolonging the need for low-interest U.S. monetary policy.
- Threats to replace the dollar with the euro as the world's primary reserve currency are not credible, in part because Europe itself does not seek this outcome. A major, sudden change in the world currency system is unworkable without cooperation among the major central banks.
- OPEC will continue to price oil in dollars and continue to receive payment predominantly in dollars. Major departure from this practice would have disadvantages for the cartel and most of its members. OPEC's rhetoric on this subject is a diversion from its refusal to produce more oil. Dollar currency pegs by Persian Gulf nations are strictly domestic management devices, as their exports are priced in dollars.
- The world economy is not yet seamless. When capital flows between currency zones it induces countervailing exchange rate adjustments (e.g., increasing the number of dollars needed to buy euros). Export nations that accumulate a financial surplus encounter this constraint when diversifying their holdings no matter in what currency they choose to be paid.
- Large accumulated export surpluses held by governments of major OPEC and Asian countries are destabilizing by their very nature, independent of currency denomination. Foreign official cash reserves helped finance the U.S. housing bubble and now enable governments to bid up prices on international commodities markets while subsidizing consumption at home.

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INTRODUCTION

Problems in the financial markets, the decline in the U.S. housing sector, and the related U.S. economic slowdown have induced the Federal Reserve to lower short-term dollar interest rates substantially. This action has increased the relative return on short-term capital in other currency zones and has caused conversion of dollar-denominated funds to other currencies. The dollar's foreign exchange value has declined as a result. This much is certain. Other factors acting on the dollar are less clear.

OPEC is using the dollar's depreciation as another in a long list of supposed reasons why it should not be blamed for high oil prices. The cartel has a history of seizing on the headlines of the day—refinery problems, the subprime crisis, geopolitical tensions, speculation—as cover for failing to produce more oil. None of its arguments explains why oil rose from $25 to as much as $145 per barrel in five years. OPEC's dollar argument and the threat of some of its members to stop using the dollar, nevertheless, have gained some resonance, as they fall in with a view that the U.S. position in the world economy is slipping and confidence in the dollar is waning. However, this view draws largely on concepts of economic strength derived from trade and currency regimes no longer in existence. Though still evoked in the press, these concepts applied when autonomous national economies financed international trade with currencies linked to official gold reserves and fail to capture how the global economy and capital movements now function.

This paper has two parts. The first reorients the discussion of the oil price to the oil market itself. It is not difficult to see the true causes of the high oil price and the cartel's role in it. The most populous countries in the world are developing rapidly and demanding more oil, but the cartel, which controls 70 percent of the world's known oil reserves, refuses to produce more. Part I also quantifies the burden OPEC's price aggressiveness places on the economy. The cartel thereby extends the economic slowdown and with it the low-interest rate policy that has the dollar effect described above.

The second part of the paper explains the benefits to oil exporters of pricing oil in dollars and the dollar's role as the world's primary reserve currency. This part also addresses how extremely large surpluses accumulated by oil exporting nations and several Asian nations can destabilize currency and asset markets. Substituting another currency for the dollar as primary reserve currency would not end global imbalances or their effects. Comparing the dollar with the euro, the only potential alternative at this time, makes clear that a switch is neither sought by Europe nor practicable for OPEC.

PART I: OIL MARKET FUNDAMENTALS

Growing and inelastic demand. For about a decade, the most populous parts of the world have been developing rapidly, increasing the world supply of manufactured goods and services, but also increasing the demand for natural resources and commodities. Initially, input markets had spare capacity, but then the slack started to disappear and prices for natural resources and commodities started rising. Supply problems in a variety

of commodity markets have caused steep price increases recently even as U.S. and possibly world economic growth are slowing.[1]

A critical component of the increased demand for commodities, including oil, is export-led economic development that has generated unprecedented current account surpluses in emerging economies. Many developing countries can use the large accumulated foreign reserves from their export surpluses to continue bidding for oil and other commodities on the world market, while they hold down input prices at home for fear of stalling their economies and inciting popular unrest. Moreover, the run-up in oil prices very recently may represent the effect of precautionary purchases by the Chinese government in preparation for the Olympics this summer. At the same time, advanced economies cannot reduce their oil consumption very much in the short run, because most of it is in the transportation sector where there are few alternatives. Advanced economies may be able to grow without using more oil, but they cannot grow while using substantially less oil, at least not yet. (OECD countries consumed slightly less oil in 2007 than in 2006.)

OPEC's role in the oil price surge. The first major prolonged price surge in the global oil market was set off by the Arab oil embargo of 1973. While OPEC has not imposed an embargo this time, the cartel members are jointly refusing to produce more oil, thus creating a price surge as oil consumption in developing countries increases. At the beginning of 2004, the market price of crude oil rose above the price target range of $22 to $28 per barrel set by the OPEC cartel[2], which has a 40 percent market share but controls 70 percent of known oil reserves. The price has stayed above the price band since then, and OPEC officially suspended it in January of 2005. We are now in the fifth year since Chinese oil demand in particular had jumped and the oil price commenced its steep upward climb—plenty of time for OPEC to have increased the pumping capacity of its vast oil fields.[3] Since the price of crude oil has risen above $100 per barrel, oil-importing nations have intensified their calls for more oil from OPEC, but the cartel has steadfastly refused them. This aspect of the oil market is exactly analogous to the 1970s. After lifting the embargo, cartel members collectively continued to restrain oil export growth in the face of increasing world demand, which drove up the international price and introduced immense volatility on the global oil market. *Domestic* fuel prices in these producing countries have remained at the pre-1973 embargo level for the most part.[4]

Though we have been hearing for some time of capacity expansion projects by some cartel members, Saudi Arabia in April, with the price near $117 per barrel, *lowered* expectations of previously announced capacity additions, and press coverage appeared of how "complex" oil field development has become in the kingdom.[5] In June, with the

[1] Javier Blas and Rebecca Bream, "Why Base Metals are bucking the Slowdown," *Financial Times*, April 24, 2008.
[2] The range applied to the weighted average price for the different crude oil grades sold by cartel members.
[3] The cartel holds 927 billion barrels of known crude oil reserves (a measure of readily producible oil, not the full resource potential), with an average production cost of less than $10 per barrel.
[4] See "OPEC: Where Oil Markets Indeed Are 'Well Supplied,' " Joint Economic Committee, Republican Research Report #110-16, November 2007.
[5] Carola Hoyos, "Saudis Put Oil Capacity Rise on Hold," *Financial Times*, April 21, 2008, and Neil King Jr., "Saudis Face Hurdle in New Oil Drilling," *Wall Street Journal*, April 22, 2008.

price near $140 per barrel, the Saudi leadership reversed itself again, indicating an intention to expand pumping capacity but without any commitment as to amount, rate of capacity utilization, or price. Recent increases in Saudi oil output more or less compensate for reductions by other cartel members subject to quotas (e.g., Nigeria). OPEC's July Oil Market Report even suggests a reduced need for its oil going forward.

By contrast, an enormous investment boom has been increasing oil output in Alberta's oil sands region. The much greater difficulty and cost of extracting oil from highly viscous compounds has not deterred Alberta oil producers, nor for that matter, has the depreciation of the U.S. dollar. Whereas OPEC, while holding spare pumping capacity, reduced its oil production, Alberta's oil sands production increased by five percent last year. As in the 1970s, the cartel is exploiting increased demand—this time in emerging economies—by restraining its output and forcing buyers to bid up the international oil price. The cartel thereby reaps massive transfers of wealth from oil importing nations.

OPEC's effort to deflect blame. The preceding does not shine a favorable light on OPEC, which professes solidarity with the less fortunate, developing part of the world. One of OPEC's favorite countervailing "explanations" for the oil price surge is financial speculation in the oil futures market, a Western invention. But while investors and speculators may buy up oil contracts and thus bring expected price increases forward in time, they do so only on the assumption that OPEC will keep the supply tight. It is indeed curious to hear OPEC officials complain about speculators driving the price up to supposedly unwanted levels when the cartel members sit on 70 percent of the world's known oil reserves and still have spare pumping capacity. Therefore, OPEC has taken the occasion of a lower exchange value of the dollar to claim that investors are buying commodities out of fear of inflation and dollar depreciation as in the 1970s.

The Arab oil embargo occurred at a time when the economy was mired in structural rigidities, policymakers had imposed counterproductive price controls, and the Federal Reserve followed an overly accommodative monetary policy, all of which were reversed in the succeeding decade. While it is appropriate to look out for repeats of policy errors, it is important not to draw spurious parallels to the past. Inflation has been low for a long time and the dollar is likely to stabilize; some predict it may even appreciate again soon. The dollar's decline does not reflect loss of confidence, which does not appear, disappear, and then reappear suddenly. Most important, if OPEC announced a price target of, say, $50 per barrel, increased oil production substantially, and promised future supply adequate to meet demand at that price, no investor would bet against the cartel, the price would drop, and we would not hear of $100 oil again.

The arguments linking dollar depreciation to higher oil prices contend that it makes oil cheaper for buyers whose home currency appreciates against the dollar, implying that they consume more oil, that the dollar-denominated oil price somehow adjusts upward automatically in response, and that higher oil prices are justified because it diminishes the oil sellers' purchasing power. But European oil buyers who use the euro, which appreciated significantly against the dollar last year, nevertheless, have faced effective oil price increases and consumed less oil in 2007 than 2006, not more. All other big OPEC customers pay for oil with independently accumulated dollars, so dollar conversion rates do not change the effective oil price they face. Again, blaming speculators does not

work, because people who buy oil contracts for financial reasons alone would not do so without taking cues on the future oil supply from the cartel. *Justifying* the oil price increases implies that OPEC *does* have control over price and deliberately raises the price, which contradicts the premise that it has not caused the oil price increases. Hence, there was no "automatic" mechanism to push up the oil price as the dollar fell.

Still, OPEC keeps repeating the dollar story and some members even "threaten" to price oil in another currency. The suggestion, for which a thorough rationale is hard to find, is that the cartel could improve its financial position by switching to another currency or a basket of currencies. In this connection, it is often reported that Kuwait has stopped pegging its home currency to the dollar and that other Persian Gulf oil exporters may follow suit. Part II addresses these points. But first, it is important to appreciate the huge burden that high oil prices place on the economy.

The OPEC tax. The coordinated restriction of output by the world's largest oil reserve holders is imposing on oil importers what amounts to an "OPEC tax," a term coined after the 1973 Arab embargo. The U.S. and the world economy have absorbed large increases in this tax for five years and still managed to grow, but the oil price keeps on rising. One way to visualize the current effect of this tax, which unlike state and federal taxes leaves the country, is to compare it to the fiscal stimulus package that Congress enacted as a boost to the slowing economy. The package has been valued at $152 billion in 2008, which equates to an increment in the price of U.S. oil imports of about $35 per barrel for 12 months—say, from $87 to $122. $87 per barrel was the Energy Information Administration's (EIA) projection in January of the average oil price for 2008. This month, the EIA again raised its projection, to $127 from $122 in June. Oil price increases in 2008 alone thus may siphon off any stimulative effect the package has and more.

The Federal Reserve has lowered interest rates also in an effort to stimulate the economy. Dollar interest rates are lower than interest rates in other currency zones as a result, which creates an incentive for short-term capital to convert from dollars to euros, for example. Conversion of dollars to euros raises the exchange rate (more dollars are required to buy euros) thus reducing the dollar's foreign exchange value. The longer it takes the economy to recover, the longer U.S. interest rates will stay low, contributing to downward pressure on the dollar—precisely the condition OPEC complains about.

The OPEC tax may adversely affect the economies of other countries both directly through increased payments for their own oil imports and indirectly through the slowdown in the U.S. The EIA estimates that OPEC's net oil export revenue could reach $1.251 trillion in 2008, up from $671 billion in 2007 and from $200 billion just a few years ago. Europe's central bank has been raising its interest rate target to address inflation but recession now also is threatening. The sharp increase in oil payments to OPEC and other oil exporters comes at a time when the International Monetary Fund estimates worldwide losses from the financial crisis of $945 billion.[6]

[6] *World Economic and Financial Surveys, Global Financial Stability Report: Containing Systemic Risk and Restoring Financial Soundness* (Washington, D.C.: International Monetary Fund, April 2008), pg. 10.

PART II: OIL EXPORTERS BENEFIT FROM USE OF THE DOLLAR

National currencies insulate national economies. Within a nation, the use of a single currency facilitates trade and the movement of capital. Between nations that use different currencies, international trade and capital movement are constrained by the need for balance in the exchange of currencies. International exchange that requires currency conversion has limited tolerance for imbalances no matter how settlement is organized be it on the gold standard, under the Bretton Woods System, or through flexible exchange rates. The rebalancing requirement is inherent in the use of separate currencies.

Under the current system of flexible exchanges rates, increased demand for one country's currency by another will drive up its exchange rate, unless offset by reciprocal currency demand.[7] The money supply of each country affects the exchange rate but ultimately the rate will adjust to limit a net inflow or outflow of money. That is the reason why most nations choose to maintain their own currency, namely to preserve and manage economic activity within their borders and to prevent the flight of capital or a flood of capital.

Pricing natural resources. A country rich in natural resources whose own economy is not large enough to make full use of them may become a net exporter. This raises the problem of how to maintain financial surpluses with import nations that use different currencies. If the export country prices its resource in domestic currency, then foreign buyers will bid up the rate at which they have to offer their currencies in exchange, thus raising the effective price of the resource to them, eventually shutting off their demand for it. This defeats the exporter's objective of selling the resource aboard. An alternative is to set the resource price in various foreign currencies. In this case, the export nation can obtain foreign currencies unencumbered by the exchange rate mechanism, but it still faces limitations. First, it can spend or invest the currencies in the countries where they originate, but attempts to move money from one country to another require currency conversions that tend to induce countervailing exchange rate adjustments. A system of separate national currencies does not tolerate continuing one-sided capital movement. Second, a resale market would arise to arbitrage price differentials caused by changing rates of exchange among the different currencies in which the resource is sold. The resale market likely would adopt a single currency, presumably that of the largest buyer (the U.S. in the case of oil), in which to quote the resource price. In response, exporters likely would quote their prices in that same currency to begin with. For an exporter (or an export cartel) to quote price in any alternative form that causes it to diverge from the global market price—even a "basket" of multiple currencies in fixed proportions—will fuel arbitrage with attendant transactions costs. However, settlement would continue to occur in the different national currencies of the oil importers, lest currency conversions move the exchange rates as described above. Clearly, there is great benefit to net exporters if they can use a single, widely accepted currency to price their resource, settle their trades, and manage their export revenues.

[7] Under the gold standard and the Bretton Woods System, official reserve transfers (of gold and reserve currencies linked to gold) settled international imbalances. A continuing trade deficit ultimately would deplete a government's reserves and end its ability to finance trade.

Pricing oil in a reserve currency. Let us suppose that oil trades were priced and settled in Swiss francs, a reserve currency. The home currency of this small country would become a bottleneck to world oil purchases, and the Swiss effectively would earn monopoly profits by the fact that other countries, in order to buy oil, first would have to bid for francs, the supply of which the Swiss control. The Swiss may or may not welcome this role as a surge in their currency's foreign exchange value would cause gross distortions in their international trade and investment relationships. But more importantly, the oil exporters would not want to share profits with an intermediary. Similarly, they would not want to risk having the Swiss inflate the supply of francs too much and reduce the purchasing power of the accumulated oil export earnings. Net exporters want to preserve the purchasing power of their earnings; they will choose for settlement the most stable medium of exchange available in adequate quantity and one that the issuer cannot readily manipulate.[8]

Why oil is priced in dollars. World War II destroyed or severely weakened the purchasing power of the major national currencies, except that of the U.S. dollar. Hence, the dollar became the currency of choice for international dealings beyond those to which the United States itself was a party. The Bretton Woods agreement formally established the dollar as the one currency whose supply could be increased unilaterally to finance the world's growing international trade and investment. Long after recovery from World War II, many countries whose own currencies face limited foreign acceptance, particularly in the developing part of the world, continue to use dollars to conduct international settlements. Dollars are part of 90 percent of all trades in the $3.2 trillion per day foreign exchange market.

The oil business started in the United States. For a long time, the U.S. was the largest oil producer in the world and it remains the largest oil consumer today. When oil began to trade in volume internationally after World War II, it would have been highly impractical to quote the market price in anything but dollars. But in addition, oil producers have specific reasons for continuing to price their commodity in dollars and preferring payment in dollars. Outside of North America, governments mostly own oil fields and sell oil through national oil companies. The state may not be able to spend or invest all of the revenue at home without bidding up the domestic price level. Governments of oil exporting countries thus often accumulate cash they want to deploy outside the country. Major oil exporters receive tens of billions of dollars in oil revenue per year (Saudi Arabia collects the most, $194 billion in 2007, according to the EIA). Their first concern is how to keep the cash secure. There is only one place in the world to safely "park" this much money and that is the U.S. Treasury bond market. These bonds have as close to zero default risk as there is in the financial world. They are readily tradable in a secondary market, and the market is so large that even the streams of oil money do not destabilize it. The only other economy that is large enough to support a comparable product in comparable volume is the euro zone—but it does not offer one. Euro-zone member countries issue bonds only individually.

[8] Gold used to act as global currency for this reason, but it is costly to transport and store securely, earns no interest, and is too scarce, causing the same intermediate bottleneck/profit problem for commodity exporters as the Swiss franc in the illustration.

The second concern is preserving purchasing power over time. The dollar is the currency for the largest national economy and for the world. The Federal Reserve has to practice sound monetary policy. There is much more at stake than gaming oil exporters out of their earnings. Inflation in the U.S. has been and continues to be low, especially excluding energy. Even so, it is easy to hedge against inflation. The Treasury offers inflation-indexed bonds and the returns in debt and equity markets quickly incorporate changing inflation expectations.

Exchange risk also could threaten the value of the oil revenue. However, the U.S. market for goods and services is vast and the opportunities for investment abundant; moreover, dollars are accepted as a direct form of payment in many places around the world. Hence, there is no pressing need to convert dollars to other currencies for consumption or profitable investment. In the U.S., property rights are well protected, capital movement is easier, and political obstacles are fewer than elsewhere. Receiving oil payments in dollars gives oil exporters the option to exchange or not to exchange them for another currency; they do not need another currency to put their cash to use.

Still, convertibility is an important consideration in choosing a currency in which to receive payment, and the dollar is freely convertible to all other currencies at generally stable exchange rates. There also are forward currency markets that importers and exporters routinely employ to hedge their transactions.

The large oil exporters derive great benefit from the ability to sell their resource for a currency—the dollar—that gives them direct access to large markets with few limitations. In addition to simplifying commodity trading (no exchange rate arbitrage), it does not constrain export revenue generation (given the dollar's liquidity compared to other reserve currencies), and it enhances their freedom to use the export earnings in many places around the world without the need for currency conversions (enhancing purchasing power).

Oil country currency pegs. The oil export revenue in the Persian Gulf accrues to national governments. Citizens have limited opportunity to earn foreign currency. The governments decide how much of the oil revenue to share with the population and set a rate of exchange for the conversion of domestic to foreign currency accordingly. These domestic currency "pegs" do not affect the flow of foreign currency because exports are priced in dollars. The pegs merely determine how much of the foreign exchange citizens as opposed to the governments are able to use. The level of the pegs has implications for the domestic money supply, interest rates, and the import prices ordinary citizens pay, but it has no relevance for the export price or the demand or the supply of foreign currency on the world market. In a country that prices its exports in *foreign* currency, pegging the exchange rate of the home currency to it is a domestic economic management tool, nothing more.[9]

[9] See Martin Feldstein, "Saudi Arabia Should Ditch Its Dollar Peg," *Financial Times*, June 18, 2008. Also see Appendix 1 for pegs in countries that price exports in the home currency.

The dollar is not "weak." Resource-rich countries often become net exporters and accumulate large export surpluses as the way to realize the wealth of their resources. This means that other countries necessarily will have trade deficits. Some of the export revenue will be exchanged for foreign goods and services, but a trade surplus by definition represents claims against foreign assets. The fundamental condition of wealth realization for these exporters has become the exchange of their resources for assets or claims against assets in importing nations. China, several other Asian nations, and a cartel of oil exporters have engineered the largest export surpluses in the history of world commerce (in the *trillions* of dollars), largely with the United States, because they covet the dollar and the assets they can buy with it. Surplus countries cannot logically argue that all the dollars they have acquired undermines their confidence in the U.S. economy and causes them to wish they had acquired euros instead. When they acquire more purchasing power than even large markets can absorb in a short time, they should moderate surplus accumulation, spread out and diversify their purchases, and take into account that buying assets in the euro zone will drive up the dollar-euro exchange rate. This is not a sign of dollar weakness. The condition they find themselves in would be no different had they piled up euros and then tried to buy dollar-denominated assets with them. The problem is the huge size of the wealth transfer and the fact that different currency zones still exist in the world.

The mark of a weak currency is that the issuing country is dependent on imports and is unable to earn more foreign exchange by increasing exports. The ability of the U.S. export sector to expand and sell more goods and services abroad is the relevant measure of strength. The U.S. is the world's largest export nation. As the dollar's foreign exchange value has declined, U.S. exports have shown remarkable increases, which suggests that the economy is flexible and competitive. In addition, long-term capital infusions by foreign investors, particularly into U.S. banks, suggest that the current turmoil in financial markets is viewed as a buying opportunity and that confidence in the currency is not waning. (Nevertheless, there is no exchange rate effect when petrodollars buy Citigroup shares, whereas petrodollars converted to euros in pursuit of higher short-term interest rates lower the dollar's exchange value.)

The world's major central banks are fully aware that the international monetary system relies on restraint in money creation. The U.S. has had low inflation for a quarter century and the former chairman of the Federal Reserve has been hailed as "the greatest banker of all time." Central banks tend to move short-term interest rates preemptively in anticipation of changes in business activity to ease downturns and restrain inflation on upturns. International investors view the major reserve currencies as maintaining their purchasing power over time within narrow ranges and move short-term capital to the currency zones with the highest short-term interest rates. The movement of capital causes exchange rates to adjust and equalize effective rates of return across currency zones. At present, the European Central Bank's (ECB) target rate of 4.25 percent is more than double the Federal Reserve's target rate of two percent. The large interest rate differential is the main reason why the dollar has declined relative to the euro.[10] The

[10] See Appendix 2.

interest rate differential is even larger, 2.5-fold, relative to the Bank of England's target rate of five percent for the British pound.

Can the euro replace the dollar? Before introduction of the euro, no one talked about replacing the dollar as the primary reserve currency, because no other economy was remotely large enough to support an increase in money supply sufficient to finance world commerce. The problems identified in the Swiss franc illustration were self-evident. The euro zone is of sufficient size, but in order for the euro to become the primary world reserve currency, a number of developments would have to occur.

First, confidence has to solidify that the currency will continue to exist and its purchasing power will remain stable. The euro zone is not a nation; it does not have a constitution and an effectively unified government; language and other hurdles still exist to labor and capital movements, and its members pursue largely independent fiscal policies. Europe would have great difficulty adopting an economic stimulus package akin to that just enacted in the U.S. The 15 European countries that use the euro have a combined GDP comparable to that of the U.S., but strongly divergent economic conditions have not yet arisen among them to test the continued viability of a common monetary policy.[11] The currency is not even a decade old. At this time, it cannot be ruled out that some member states eventually may revert to using their own currencies—an utterly implausible outcome in the U.S.

Second, a fully integrated capital market has to develop that grants unfettered foreign access.[12] This means that the inflow and outflow of capital in enormous volume to which the U.S. has opened itself would have to be tolerated by each of the euro-zone countries—not just relative to other euro-zone members but all countries. Individual European governments would have to accept foreign takeovers of national champions, which they are not all yet prepared to allow even by euro-zone partners. It is telling that the ECB has not undertaken to create a unified pan-European debt market, akin to the U.S. Treasury market, backed collectively by the full faith and credit of the national governments in the entire euro zone. Country specific debt obligations are less attractive to non-Europeans with large sums of cash. European governments likely view such an initiative as premature precisely because it would encourage expanded use of the euro.

Third, the euro would not be filling a vacuum; a primary reserve currency, the dollar, already exists. Absent concurrent, bank-orchestrated extraction of dollars, world inflation would ensue from a rapid introduction of another currency in large quantity. When the nations of the euro zone adopted the euro, they simultaneously withdrew their individual currencies from circulation. A similar transition worldwide would have to be

[11] The current economic slowdown is uneven and raises this issue: "Countries sharing the euro are reacting differently to the global economic slowdown, and the currency's strength is complicating the ECB's task of fixing an interest rate for the bloc as a whole." Luca Di Leo and Sofia Celeste, "Berlusconi, Echoing Sarkozy, faults ECB for Its Limited Role," *Wall Street Journal*, April 17, 2008.

[12] At the most basic level, Europe does not even have unified banking regulations, and there are fears that it is ill-prepared to handle the failure of a pan-European bank. See Joellen Perry, "EU Is Urged to Fortify Bank Rules," *Wall Street Journal*, March 11,2008.

bank-orchestrated as well, which implies mutual consent and cooperation among the major central banks of the world to execute a common plan toward an agreed outcome.

Fourth, the economy standing behind the euro will have to grow at an adequate rate. Economic growth currently is slowing in Europe, and it is not clear that the slump there will be shorter or less severe than in the U.S. Long-term, structural and demographic challenges in Europe could be greater than in the U.S. Switching to the euro would imply a belief that the euro zone will perform better economically and be better managed than the U.S. (not just the same) for which there is no objective basis.[13]

For these reasons, the European Central Bank will not enlarge the money supply unilaterally in an attempt to position the euro as a replacement for the dollar. A group of oil exporters suddenly adopting the euro as "their" currency would not constitute representative global sentiment with respect to the euro's prospects and would not negate reservations to further openness that various euro-zone members still harbor. It would produce the effect described in the Swiss franc illustration and drive up the euro's foreign exchange value. The exporters themselves, who have been receiving dollars as payment for their oil all along, would face further, accelerating depreciation of their dollar-denominated assets relative to the surging euro. Any uncoordinated attempt to force a conversion from the dollar to another currency would reduce the purchasing power of their past as well as future earnings.

Oil exporters have long exchanged some of their dollars for other currencies to make purchases in Europe, Japan, and elsewhere. Rather than have oil buyers exchange their home currencies for dollars to pay for oil only to immediately reverse the exchange, exporters can ask for payment in euro, yen, and so on from the outset to the extent that they have predictable need for other currencies. Iran, as a matter of propaganda, derides oil payments in dollars, but Iran is subject to U.S. financial sanctions and consequently has greater demand for non-U.S. currency. The dollar is freely convertible and it matters not who converts it, the oil buyer or the oil seller. If Iran's oil customers (which do not include the U.S. as it boycotts Iran) pay in other currencies rather than in dollars that Iran subsequently converts, it has no incremental effect on exchange rates, no bearing on the dollar's role as the currency of the oil trade, or on its role as reserve currency. It also does not present a problem for euros to replace dollars gradually in transactions between the euro zone and its trading partners. For example, if eastern European countries that used to pay Russia in dollars for natural gas imports now make payment increasingly in euros and Russia uses those euros to buy goods in Europe, it reduces transaction costs and does not imply loss of faith in the dollar. It simply reduces the transaction demand for dollars to which the supply of dollars will adjust.

Limitation of the currency system. Global economic growth can be financed without destabilizing exchange rates as long as world dollar demand derives from international market requirements for liquidity and countries that accumulate net export dollar earnings

[13] It is interesting how concerns in Europe over higher labor costs, less flexible labor markets, less favorable demographic trends, more regulatory obstacles, greater energy import dependency, and generally lower economic growth seem to receive scant attention when the euro is rising.

do not attempt massive currency conversions—in other words as long as dollars move mainly within the world's "dollar zone." The system's limitation does not derive from use of the dollar; the use of any other currency in its place would face exactly the same limitation. The countries that have generated huge export surpluses with their aggressive export policies—OPEC with its high-priced oil and China with its low-priced labor—are straining against the international currency *system*. Their accumulating financial wealth can be recycled into the world economy but not without the consent of the nation states that still make up the world economy. That consent is conditional. Nations still want to manage their own economies and they will not allow unconditional transfer of control, particularly when the transfer is to foreign governments or government-controlled entities. This is the reason why they still maintain their own currencies, and why the euro zone despite seeking to enhance transaction efficiency and international competitiveness by consolidating multiple currencies into one, did not adopt the dollar as its currency. The fact that it takes more dollars to buy an item in Europe than before does not imply waning confidence in the dollar; it means that Europe discourages outside acquisition of its assets more than the U.S. does. This is a manifestation of the basic problem that countries with massive export surpluses face, namely how and where to use them. They have this problem to varying degrees no matter in what currency they choose to be paid.

CONCLUSIONS

Under the World Trade Organization's (WTO) objectives and the prevailing currency regime of flexible exchange rates, national governments and central banks no longer have the task of keeping international trade and official national currency reserves in balance. Their role is to open national markets, minimize market manipulation, and maintain the purchasing power of currencies. Relatively open international trade policy, generally responsible monetary policy, the consolidation of 15 different currencies into the euro, and the dollar's role as the world's primary reserve currency, enable global capital more than ever before to seek out the highest rates of return around the world.

However, obstacles to international investment still exist. Among them is that different currencies still exist, and when capital moves from one currency zone to another, exchange rates adjust in countervailing fashion. Since national governments can influence only the conditions within their national borders and central banks can control only the currency they issue, relative economic conditions and rates of return among different currency zones are not controllable and will vary over time. Since net capital flows will reverse in response to changing relative economic conditions, exchange rate changes are inevitable. Therefore, a currency's appreciation or depreciation does not necessarily imply bad national economic or monetary policy. Unlike the times of the gold standard and the Bretton Woods System, capital now moves around the globe without the need for periodic settlement of claims to official reserves.

In the far more flexible system of today, some governments have perpetuated imbalances of size and duration that would never occur by market forces alone. The oil exporters of the OPEC cartel transfer wealth from oil importing nations on a colossal scale by jointly restricting supply on the world market. If they worked individually to expand supply the

way Alberta, Canada does, we would not be facing $140 oil. The governments of China and other Asian nations have not adhered to market-determined conversion rates for their currencies and diverted huge streams of foreign trade generated cash to official reserves.

Much of this cash is reinvested in the developed world but where and how influences interest rates, exchange rates, and other market prices. Since the dollar is the primary reserve currency, the foreign governments accumulate mainly dollars, which may boost the dollar's exchange value but depending on how they manage the cash, also may lower its exchange value. In addition, the cash accumulated by export surplus countries enabled the housing bubble[14] and other highly leveraged investment activity in past years. These effects are no reflection on Federal Reserve policy, U.S. economic policy, or the growth prospects of the U.S. economy—except that accumulating dollars and using most of them in the U.S. bespeaks confidence. The governments of these countries are not playing by the rules of open markets; they are taking advantage of the absence of global system controls.

This problem cannot be fixed by changing the primary currency the world uses. First, that would only shift some of the problem, not solve it. The country that furnishes the world's primary reserve currency is open to greater capital flows and greater potential market variability. Replacing the dollar in this role would not cure the imbalances; it would merely change their denomination and impose a larger share of their market impacts on other countries. Second, a change in world currency is not practicable. Changing the world's primary reserve currency requires the consent and cooperation of the world's major central banks. The euro is the only conceivable candidate but euro-zone economies lack cohesion and its member governments want to maintain a greater degree of market control than they would have if they had adopted the dollar or if they turned the euro into the primary reserve currency. It is also doubtful that changing the currency system or even the world economic system can stop national governments from pursuing counterproductive policies.[15] It certainly is clear that raising barriers to trade and capital flows would slow world economic growth.

In times of stress, it is easy to focus only on the negative. The current system has brought many benefits and earlier systems had brought many problems arising from the very controls intended to maintain order, including possibly war. A flexible system implies an ability to adjust to change, not that adjustment is unnecessary. Market pressure is rising on China to reduce its export surplus, market pressure also is rising on governments to reduce their subsidies that make commodity demand and oil demand less price responsive, and alternatives to OPEC oil will be found.

In assessing the position of the U.S. and the dollar in the world economy, it is important to apply the proper framework. In weighing policies, it is important to allow markets enough time to adjust.

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[14] See Robert P. O'Quinn, "Chinese FX Interventions Caused Unsustainable International Imbalances, Contributed to U.S. Housing Bubble," Joint Economic Committee, Republican Staff Study, March 2008.
[15] Even under the gold standard, the so-called mercantilists managed to hoard reserves.

APPENDIX 1: PEGS WITH EXPORT PRICES IN DOMESTIC CURRENCY

When export prices are denominated in foreign currency, currency pegs can control only the import prices. When export prices are denominated in domestic currency, pegs can control the effective export and import prices. Exporters generally set prices for their products in domestic currency, because their costs (such as wages) are in domestic currency and they reinvest profits largely in the home country. This means that foreign buyers are required to exchange their currencies for the exporters' currency. Under flexible exchange rates, unless there is offsetting reciprocal demand for foreign currency, this will tend to increase the exchange rates and the exporters' effective prices to foreign customers. It will also lower the effective price of imports. In order to hold down foreign-domestic currency exchange rates, the export country's central bank can increase the supply of domestic currency. It thereby can keep the effective price of its exports from rising and foreign demand for its products from falling. It thereby also can prevent import prices from declining and consumption of imports from increasing. China has taken this course. For ten years up to 2005, it maintained a fixed dollar-yuan exchange rate, which is called a "peg" in the context of what generally is a flexible currency system. Since 2005, China has allowed some yuan appreciation but not nearly to the market level. It has accumulated huge export and foreign exchange surpluses as a result.

It is important to note that increasing the domestic money supply in order to manipulate exchange rates will lead to inflation and may induce the government to reabsorb the additional money it has created without being able to use it. China's expansionary monetary policy has increased inflation, and its central bank has reabsorbed yuan to counteract it. The perpetuation of the economy's export orientation, nevertheless, has built up inflationary pressure to the point where the government finally also is allowing its currency to rise significantly against the dollar.

APPENDIX 2: RELATIVE INTEREST RATES AND THE DOLLAR

When nations open their economies, capital can move across borders as well as goods and services. Relative real rates of return determine the direction of voluntary capital flows, which give rise to their own currency demand and supply on the foreign exchange market. Capital flows out of one currency and into another easily can dominate the exchange rate adjustments that trade alone would induce. Exchange rates will adjust to equalize the total demand and total supply of currency on the exchange market based on trade *and* investment flows across currency zones. Indeed, the impact on exchange rates of net capital flows can alter the effective prices of imports and exports and thereby override their tendency to converge. If capital comes from other currency zones, the recipient country will experience an appreciation of its currency's foreign exchange value, which makes its imports cheaper and its exports more expensive. Furthermore, changes in international capital investment can affect national economic growth and thereby the demand for imports. A nation that attracts capital may experience higher growth leading to higher income and increased demand for foreign goods. For these reasons, international trade may not balance under flexible exchange rates.

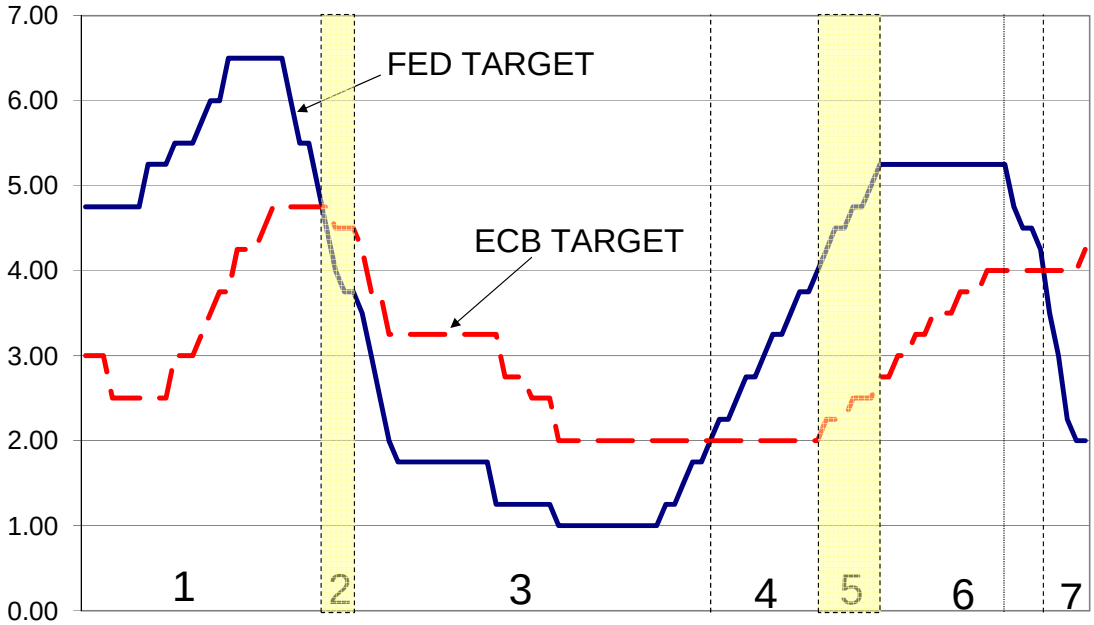
Short-term capital moves in response to interest rate differentials among different currency zones, and long-term capital moves in response to relative growth and profit prospects among nations. Neither movement can be fully modeled. Short-term interest rates change with the business cycle, which is not exactly predictable, and interest rate differentials depend on the relative positions of the cycle in different currency zones, which is even less predictable. Comparative economic prospects among the nations of the world are just as difficult to quantify, all of which means that there is no integrated mechanism by which to predict flexible exchange rates. There are only partial models that provide limited explanations. Hence, there is no longer a standard for what an exchange rate should be. International trade and investment change the demand and supply of different currencies relative to one another and there is no preordained level at which they must settle. In 1999, the euro was introduced at $1.17. It promptly declined and traded far below that rate for several years. It has been rising since 2003 and now trades well above that rate. There is no financial or economic mechanism by which it must return to $1.17.[16] If there is no absolute standard for the value of a currency, then the concepts of "strong" and "weak" lose their meaning except in a transitory sense.

It turns out that the dollar has risen and fallen against the euro mainly in response to short-term interest rate differentials between the two currency zones: when short-term interest rates were higher in the U.S., the dollar has almost always risen and when they were higher in Europe, the euro has almost always risen. The following two graphs show the Fed and ECB target rates relative to the dollar's value in terms of euros since the euro's inception. The only substantial departures from this relationship occurred during two brief periods. In the first half of 2001 (period 2) the dollar rose while the Fed's target was lower and dropping faster than the ECB's, and in the first half of 2006 (period 5) the dollar fell while the Fed's target was higher than the ECB's and the difference was increasing. In period 6, the dollar also fell while the Fed's target was higher, but it was constant and the ECB was closing the gap. Near the end of that period, the Fed cut its target sharply.

As stated, other forces are at work simultaneously, such as movement in longer-term capital flows. But the graphs illustrate that simple inferences from exchange rate changes with respect to foreign confidence in the U.S. currency are not valid. At every hint that the Federal Reserve may raise its target rate or that the ECB may lower its target rate, the dollar rises against the euro. That suggests no lack of confidence.

[16] If all goods were freely tradable, arbitrage would generate a single effective price worldwide for each good and the exchange rates resulting from the conversion of currencies in the equilibrating process would yield what is known as "purchasing power parity" (PPP) exchange rates. In other words, the dollar-euro exchange rate that equalizes the effective price in dollars and in euros of a representative basket of goods would establish purchasing power parity, and the actual exchange rate would tend toward this value. However, a raft of conditions would have to hold, among them that the PPP rates themselves are stable, which they may not be among dynamic economies. But most important, this theory is trade-based and leaves out investment flows. A huge portion of currency transactions are investment based, not trade based.

FED AND ECB INTEREST RATE TARGETS



DOLLAR VALUE IN EUROS