

While oil prices have been rising, the US dollar has staged a steady decline, leading to much speculation over the linkage between the two. *Eric Fishhaut* investigates their connection

# Currency correlations

★ The US dollar has undergone a 40% decline against the euro over the past seven years. At the same time, crude oil prices have risen over 350%, and were up 57% in 2007. The impact of currency on the world energy markets, and whether there is cause or effect is much debated.

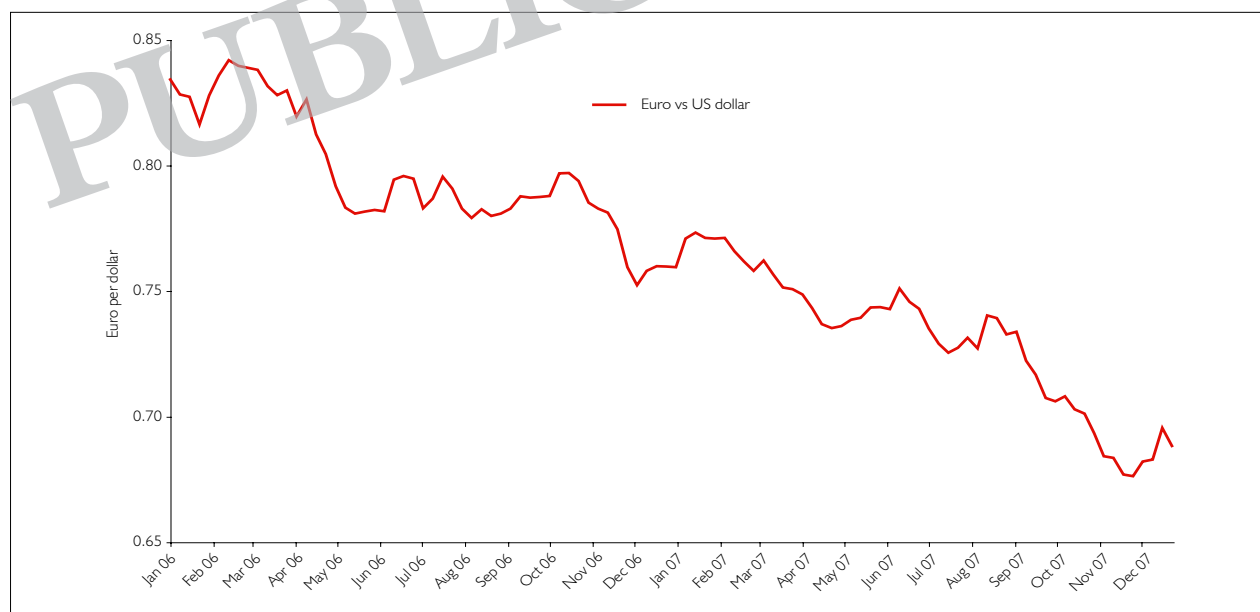
## Economic impact of dollar weakness

Last year was a tough one for the greenback. Peaking in mid-January, it ended the year down 10% against the euro, (see figure 1) as numerous fears arose over the US economy, most prominently, the subprime mortgage crisis.

However, the drop in the dollar has allowed the US economy to reap some rewards. American products have

become increasingly competitive globally, boosting exports for items such as Caterpillar tractors and Boeing jumbo jets. In fact, some European companies, including Airbus, are planning to shift more manufacturing lines to the US to offset the strength of the euro. Airbus has already opened operations in Wichita, Kansas and Mobile, Alabama. Interestingly, aeroplanes are generally sold in dollars, while Airbus' European operations have costs in euros. And that squeeze is the second part of the one-two punch the falling dollar puts on competing economies that have experienced strengthened currency values.

Alternatively, many nations that have pegged their currencies to the dollar have been severely impacted by



### F1. Euro versus US dollar

The US dollar has been on a long-term fall. Here we see that its weakness against the euro (measured weekly) has dropped about 18% over the past two years Source: International Monetary Fund



©iStockphoto.com

incrementally lower interest rates in the US as the Federal Reserve tries to prevent recession. While that may be sound policy in the US, it is problematic for surging economies in the Persian Gulf that are undergoing a substantial, oil-fueled economic expansion. The spectacular surge in oil revenue along with the weakening dollar has sparked a rise in inflation in the Gulf States and a heavy shock to imported construction labourers working for low wages who have, in some cases, now resorted to protests and wage strikes due to their inability to afford essentials.

Some countries with strict controls over their currencies have managed to share in the benefits from the dollar's drop. Vietnam, whose controlled currency has stayed relatively constant against the dollar, is enjoying a flood of investors fleeing nearby Thailand, whose currency has risen sharply against the dollar. Meanwhile in China, where the authorities limit the currency to a narrow band linked to the dollar, the government has resisted moving to a free market valuation. By keeping the currency relatively weak, Chinese exports have boomed by riding the weaker-dollar wave selling to countries that have seen the dollar drop.

### Energy growth

Because oil is priced globally in US dollars, the two are intertwined – with a long position in oil automatically creating a short US dollar position, and vice versa. There are those market analysts who cite the dollar's drop against other currencies, along with the Fed's interest rate-cutting operations, as a major factor behind rising oil prices. This camp argues that prices should not continue to climb, having risen 35% in the second half of 2007, as rising inflation and falling consumer confidence will lead to diminished demand for energy, both directly and indirectly. Some energy traders

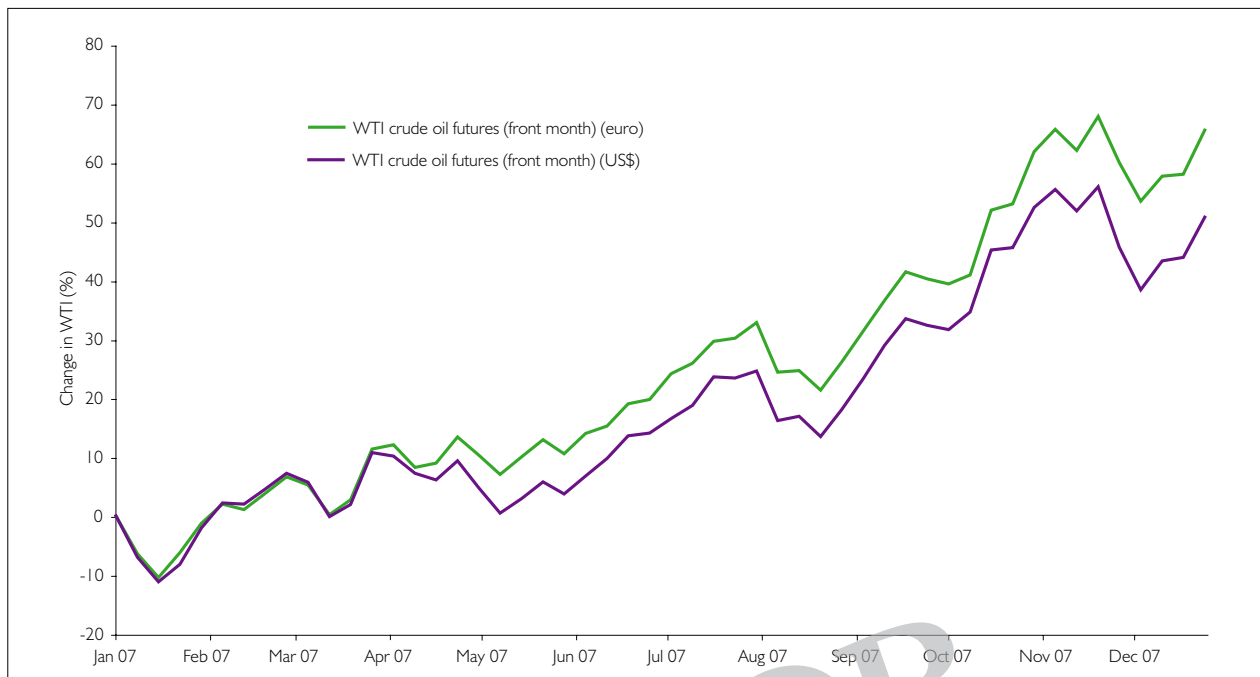
have concerns that rising inflation cuts consumer buying power, resulting in reduced demand for gasoline and oil. A recent US Department of Energy report lowered global oil demand predictions for next year, and recent Energy Information Administration inventory reports have shown demand growth as moderate at best.

Additionally, there is worry that interest rate cuts will stop due to higher inflation. Countries with natural reserves of oil, priced in dollars, are moving away from also holding their currency reserves in dollars (via Treasury Bills or Dollar Notes). Why take the risk of both reserves depreciating? Saudi Arabia has moved toward euro denominated paper and other exporting countries are also realigning. The price of oil is rising slower when measured in euros (as shown in figure 2), which has led to calls for a change in the basis of global crude oil pricing.

### Correlation

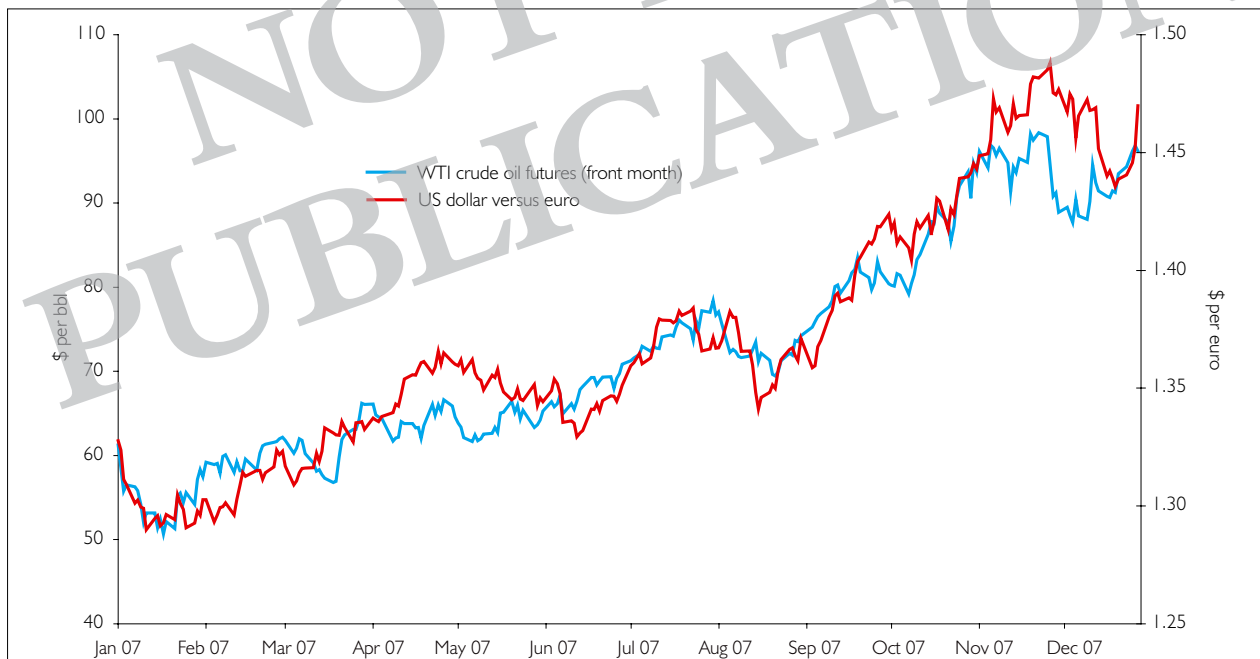
However, there are also those with the contrary view. In a recent report, Goldman Sachs argued that the apparent correlation between crude oil prices and dollar moves over several months has renewed a false perception of the potential relationship between these markets. The US dollar versus euro exchange rate increased from 1.34 \$/EUR to 1.48 \$/EUR between mid-August and late November, at the same time that WTI crude oil prices increased from \$71 per bbl to the all-time highs of over \$98 per bbl (see figure 3).

Correlation between currency prices and crude oil prices seems intuitive, as the non-US dollar-based economies find increased purchasing power and oil producer margins are squeezed in response to US dollar depreciation, assuming that production costs are priced in a local currency against dollar-denominated revenues. Put simply, many buyers are



**F2. Percent change of WTI in dollars and euros**

Calculating the change as a percentage for WTI front-month crude in both US dollars and euros demonstrates how the rising price effect is dampened when denominated in euros - Source: Nymex and International Monetary Fund



**F3. WTI and US dollar versus euro**

The overlay of the WTI crude oil front-month futures price rising with the dollar/euro on a daily basis suggests that these markets are moving along a similar trend

Source: Nymex and International Monetary Fund

willing to pay more at the same time producers are looking to push prices up.

In its report, Goldman Sachs states: “We continue to believe that the recent strength in the oil price is primarily the result of tight cyclical and structural fundamentals driven by declining inventories and escalating cost inflation in the industry, and that these fundamentals will continue to drive the price of oil.” To prove its point, Goldman Sachs notes that a look at changes in crude oil prices against \$/EUR on a longer month-over-month basis shows very little correlation over time.

In the last several months, when the US dollar and WTI prices have seemed to be moving inversely against each other on an almost daily basis, the nearly 9% depreciation in the dollar since mid-year has been much smaller than the almost 32% increase in oil prices in the same time period. During this period we observe that the volatility in the crude market is measured at almost four times that of the foreign exchange markets. The crude oil market has displayed fairly consistent volatility this past year, with WTI prices trading the last couple months of the year mostly between \$90 per bbl and \$98 per bbl.

In spite of these observations, the trend could be changing, as energy production has begun to move to regions where costs are not denominated in US dollars. For example, high-

cost tar sands producers in Canada are facing tighter margins as costs denominated in local currencies are being matched against revenues tied to dollars. Restated, as the Canadian dollar has moved higher against the US dollar, the Canadian production costs have grown as a share of the US dollar-denominated price of oil – that familiar margin squeeze.

### Looking ahead

There are a lot of concerns about the health of the US economy in general and the buck seems to be losing its status as the major global currency. To what extent the dollar will continue its decline is unclear. This has fueled speculative buying of oil by investors trying to hedge losses in other investments, further contributing to the rise in prices. The effect of higher energy prices impacts nearly every aspect of economic life and business cycles – there is very little in daily life that is not affected by oil prices and oil availability.

Focus on the fundamentals demonstrates the currency issue is only exacerbating the real price inflation that has occurred in the energy markets in recent years. Nonetheless, a rebound in the US economy will likely provide a stabilising factor to the global energy complex. **ER**

Eric Fishhaut, senior vice-president, technology strategy,  
GlobalView Software. Email: Eric.Fishhaut@gvsi.com