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Oil Prices and US Growth: Excuses, Excuses

Many economists, as well as the US Federal Reserve, blame the recent slowdown in consumer spending and GDP growth on the increase in oil prices. The implication is that economic activity should rebound strongly once oil prices stabilize or fall. We disagree

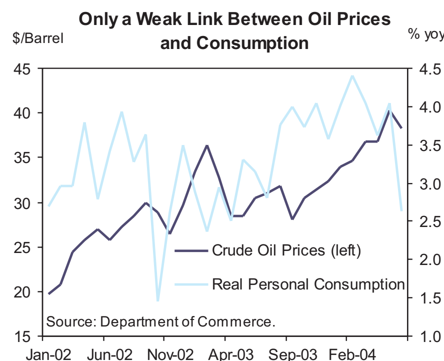
We see three reasons why the slowdown in consumption is likely to prove more persistent than the Fed and most economists expect. First, it is hard to blame oil prices for much more than 0.5 percentage point of the three- percentage-point deceleration in US consumer spending seen in the second quarter. Energy doesn't feature prominently enough in US household budgets to have such a large effect.

Second, there is a more plausible explanation for the spending slowdown, namely the withdrawal of fiscal and monetary stimulus from a household sector whose finances remain stretched. We estimate that the loss of the stimulus will subtract more than one percentage point from US household spending growth in 2004 compared with 2003.

Third, the energy hit to spending—while moderate —may prove to be more persistent than in the past. According to the oil futures market, much of the recent price increase is likely to persist. This marks a key difference from prior episodes since the 1970s, which often featured an eventual sharp decline in prices and a subsequent rebound in spending.

Why the Fed Expects a Rebound

Real personal consumption has slowed sharply since early 2004. In the second quarter, it rose only 1.0% (annualized), down from an average of 4.2% over the prior four quarters. This is the sharpest slowdown since the 1990-1991 recession.



Along with many economists, the Federal Open Market Committee has blamed the slowdown on the increase in oil prices. At the same time, the FOMC expects spending growth to reaccelerate in coming quarters. This suggests that higher oil prices only have a temporary impact on spending growth.

Under this line of thinking, when oil prices rise, real income growth is below trend, and this weighs on consumption. Once oil prices stabilize, real income growth picks up to the underlying trend, and so does spending growth. Finally, when oil prices fall back to their prior level, real income growth rises above the underlying trend, and spending accelerates further. Apparently, the FOMC believes that oil prices will soon stabilize or even revert to their prior level, with beneficial impacts on real income growth and spending.

We have three problems with this analysis. First, the real income hit from higher oil prices looks too small to explain the sharp consumption slowdown. Second, the analysis ignores other factors that are likely to weigh more persistently on spending growth, such as the withdrawal of fiscal and monetary stimulus. Third, the oil futures market suggests that prices are unlikely to fall back anytime soon.

Problem 1: Spending Hit from Oil Is Modest

In our view, the spending hit from higher oil prices is unlikely to be as large as widely believed.

1. The timing doesn't fit. Most economists agree that it is the change in energy prices that matters for growth, not the level. Energy prices have been since 2002—but both consumer spending and real GDP growth accelerated sharply starting in mid-2003 and did not slow significantly until the spring of 2004. This is strong *prima facie* evidence against the view that energy prices are the primary reason for the slowdown.

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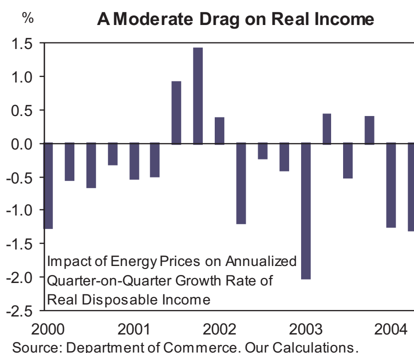
2. The impact on real income is not that large. In the chart below we look at the impact of quarterly changes in retail energy prices on real disposable income growth. In the second quarter, we calculate a hit of 1.3 percentage points. Even under the unrealistic assumption that consumers react to higher energy prices by reducing their real consumption one-for-one, this implies that real consumer spending would have risen only 2.3% (annualized) had energy prices remained stable. Such a pace would still be well below trend.



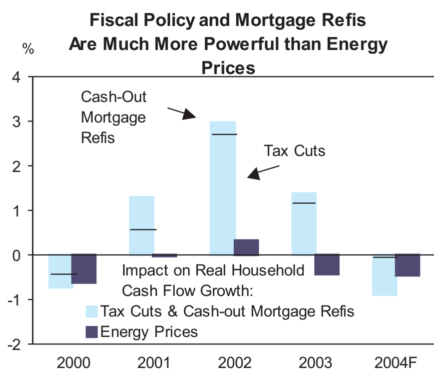
3. There are offsetting changes in saving. The preceding calculation significantly overstates the impact of energy prices on growth. This is because the assumption that consumers reduce their real spending one-for-one when energy prices rise is only reasonable for lower-income households who live from paycheck to paycheck. It is highly unrealistic for higher-income households who can smooth out consumption by dipping into their savings. Accordingly, only part of an energy price shock will translate into lower spending, with the other part resulting in a temporary drop in the saving rate. In fact we estimate that only about 50% of any energy price shock translates into lower spending. This suggests that real consumer spending would have risen only 1.6% excluding the energy price increase.

Problem 2: Other Factors Are More Potent

The alternative, and to us more compelling, story is that the slowdown is due to the withdrawal of fiscal and monetary stimulus from a US household sector whose balance sheet remains very stretched. We compare the impact on household cash flow growth from energy prices with that from tax cuts and cash-out mortgage refinancing—one key way in which the expansionary monetary policy of the last few years has boosted spending.

The message is that tax cuts and mortgage refis do a much better job than energy prices in explaining the sharp deceleration in household spending growth in 2004. Fiscal policy and mortgage refinancings added 1.4 percentage points to household cash flow growth in 2003 and are on track to subtract an estimated 0.9 p.p. in 2004, for a swing of -2.3 p.p. Meanwhile, energy prices subtracted 0.4 p.p. in 2003 and are on track to subtract 0.5 p.p. in 2004, for a swing of only -0.1 p.p.

Assuming again that the impact of changes in cash flow growth on spending growth is about 50%, this implies that fiscal policy and mortgage refinancings will dampen household spending growth in 2004 relative to 2003 by more than one percentage point. In contrast, energy prices are unlikely to have much impact on spending growth in 2004 relative to 2003.



Problem 3: Oil Price Rise Looks Permanent

In the past, oil shocks have typically been temporary. The hit to real income and spending growth was often followed by a sharp swing toward stimulus.

But the recent price increase looks more permanent, as we discuss in more detail on page 4. The increase in oil prices has not been confined to the front-month contract; five-year crude oil forwards have also risen sharply to about $35/barrel. This surge stands in sharp contrast with the stability over the prior 15 years, when five-year forwards fluctuated in a narrow range around $20/barrel.

Our Commodity Strategy analysts believe that this surge is, in fact, justified by the fundamentals. They see two main reasons why prices are likely to average at least $30/barrel for the next five to ten years:

1. Underinvestment. Capital spending on energy exploration, extraction and distribution has lagged badly over the past two decades. An estimated $2.4 trillion worth of capital spending—nearly triple the amount seen in the 1990s—will be required over the next ten years to meet trend demand growth. Relatively high prices will be necessary to keep older capacity—which features relative high marginal costs of delivering oil to the end user—on line while the new investment occurs. This factor by itself is likely to boost equilibrium prices by $5/barrel, from $20/barrel in the 1990s to $25/barrel.

2. Shift from subsidies to taxes. In the 1970s and early 1980s, governments in both oil-importing and oil-exporting countries heavily subsidized energy infrastructure investment. In the oil-importing countries, the subsidies have essentially ended. In the oil-exporting countries, the situation is worse, as a rapidly growing population and the need to pay down past debt are forcing governments to tax oil production at increasing rates. Our commodity strategists believe that the swing from subsidies to taxes has boosted equilibrium prices by another $5/barrel or more, to at least $30/barrel.

The rise in long-term oil forwards is important because it makes it less likely that the current (limited) hit to income growth will be followed by a period of significant stimulus.

Spending Growth to Remain Slow

We conclude that only a relatively small part of the slowdown in household spending growth is due to a temporary

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increase in oil prices. The bigger factor has been the withdrawal of fiscal and monetary stimulus—a process that is likely to continue. On the fiscal side, both the large budget deficit and the political calendar argue against new tax cuts any time soon. On the monetary side, recent commentary from the Federal Reserve suggests that additional monetary tightening is in store for the remainder of 2004, a development that would likely translate into somewhat higher long-term interest rates as well.

Hence, we maintain our view that household spending will grow at only 2.5% in the remainder of 2004. In fact, it is likely that spending growth will fluctuate around a similarly sluggish trend for a period of several years, as households raise their saving rate to a level that is consistent with acceptable wealth creation in an environment of relatively low financial asset returns.

Global Vulnerability to Oil

We have also looked at global vulnerability to rising oil prices, using two basic measures of 'vulnerability.' The first is the loss to net income suffered by oil importers (proxied as the terms of trade loss suffered as oil prices increase). The larger the net oil imports as a percentage of GDP, the larger this effect will be. The second measure is the direct impact on consumer prices. This effect will rise as oil consumption relative to GDP rises.

Net oil imports as a percentage of GDP have fallen in most economies since the early 1980s. In the OECD as a whole, net imports have fallen continuously from 2.4% of GDP in 1978 to just 0.9% in 2002. The decline is less dramatic but still strong even when oil exporters like the UK, Canada and Norway are excluded.

Thus the terms of trade loss is likely to be much smaller today than in the 1970s. For the OECD as a whole, if oil prices stay at $45/barrel (compared to the recent trough of $25/barrel in 2002), the terms of trade loss will be around 0.7% of GDP. This is similar to what was seen in the 1990-1991 Gulf War and about one quarter of the impact in the early 1980s. Sustained oil prices of $50/barrel would cause a loss of 0.9% of GDP. These are reasonably significant numbers that support our view of slower global growth ahead. Japan is the most vulnerable of the G3, with Euroland closely behind. The US produces enough domestic oil to make it slightly less vulnerable. The UK and especially Canada will gain.

The impact on inflation is harder to measure, since much depends on the policy responses to slower growth and rising inflation. Higher oil prices could encourage the Fed to tighten more quickly, since these prices enter the headline inflation numbers extremely rapidly. But if we are right and the economy slows more than the Fed expects, then a 'measured' pace of tightening is more likely. In Japan, policymakers might welcome the inflationary impact and be comfortable keeping policy on hold. The ECB is probably somewhere in the middle. With growth already above trend and inflation stubbornly above target, the ECB might need to start tightening earlier than we currently anticipate. ■

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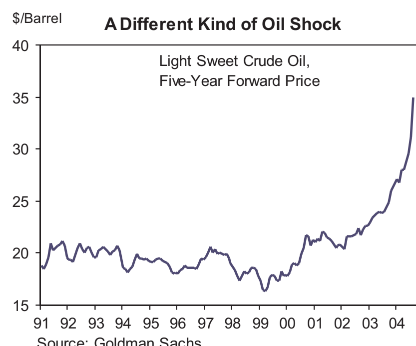
The Revenge of the Old Economy

Higher oil prices are unlikely to be transitory

The sharp rise in energy prices that began in 2000 is the result of two decades of extremely low investment rates in the global infrastructure to supply and deliver oil, caused by poor rates of return on these investments. Crude oil production, transport and refinery output are now all operating at record levels—and doing so against the backdrop of only a modest increase in investment and nearly no growth in capacity. As a result, the market is pushing up against capacity constraints in every aspect of the system. At the same time, strong demand has helped draw down inventories to crude and products to 30-year lows, leaving the system extremely vulnerable to increased geopolitical uncertainty.

The modest investment that has occurred so far has been concentrated not in new areas with high returns on investment, but in old areas with sufficient infrastructure and low returns on investment. More productive investment will require massive ‘next-generation’ infrastructure projects to open up new areas for drilling. These include new rigs and platforms for development, new pipelines and tankers for transportation and greenfield refineries for processing—all of which have very long lead times.

The last time the oil industry built infrastructure on this scale was during the 1970s, which provided years of energy demand growth at a relatively low marginal cost. The ‘exploitation phase’ of the 1980s and 1990s has come to an end, however, and the oil industry has entered an ‘investment phase’ that could last for five to ten years before new infrastructure is sufficient to usher in a new lower-priced exploitation phase.



Source: Goldman Sachs.

Our Commodity Strategists think a WTI oil price of at least $30/barrel will be required over the remainder of this investment phase in order to keep the older supply base cost-effective and to generate sufficient investment to displace the older supply base while meeting new demand growth.

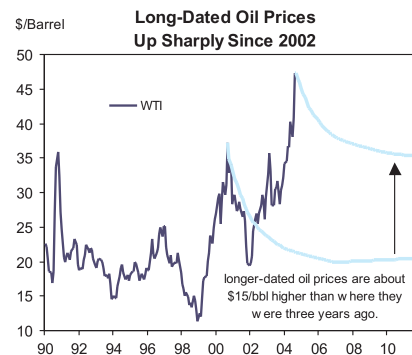
Once new production comes on line five to ten years from now, prices will likely decline as new production displaces older, more expensive fields. Industry returns are likely to improve then, despite lower prices. Prices could, however, fall to even lower levels than during the 1990s, as technological advances have significantly reduced the cost of producing oil once the infrastructure is in place.

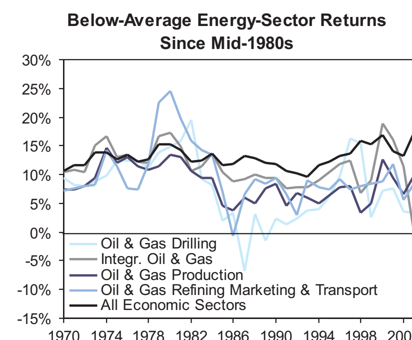
Significant Near-Term Cash Needs

In the near term, the required increase in spending is significant. Our analysts estimate the total capital spending required over the next decade to meet trend demand growth to be some $2.4 trillion—triple the level of spending during the 1990s.

Alongside this, the tax bill on oil is likely to rise by $1.8 trillion to $4.2 trillion over the next decade. Government policies have shifted significantly over the past two decades, moving from subsidizing to taxing energy production and delivery. These taxes take the forms of increased environmental regulations, larger royalty payments on production leases and increased revenue taxes for both sovereign and corporate companies. This alone is likely to increase the equilibrium oil price by $5/barrel.

Taken together, the necessary investment and higher taxes are likely to raise the equilibrium oil price by $10/barrel, from $20/barrel in the 1990s to $30/barrel in this decade.





Neither OPEC nor non-OPEC governments are likely to provide financial assistance for infrastructure development as they did in the 1970s. In the developed world, governments will hesitate to provide significant subsidies that cross national borders; the global nature of the oil market means that they are unlikely to fully capture the benefits of such subsidies.

Government taxes, which have risen sharply, are unlikely to recede. Tax expenditures represent a significant upside risk to oil costs should host governments try to extract more of producers’ revenues. If prices drop, host governments are likely to seek to maintain revenues by increasing taxes; if prices rise further, they are likely to want to extract more of the rise in revenues.

Taxation is also an issue for OPEC governments, which are running significant deficits and face very high debt levels. These countries will need to re-direct a large share of cash-flow generation into government spending programs to support rapidly growing populations and to pay down past debt. This will leave very little free cash flow to invest in the oil industry. OPEC as a whole is likely to need prices at $31/barrel to maintain needed spending programs. ■