

INVESTMENT UPDATE

No one alive today has ever seen a more severe natural disaster in the US than the one that produced the horrific loss of life and property from Hurricane Katrina. Early reports that New Orleans and the Gulf cities of Mississippi and Alabama had successfully “dodged a bullet” from the impact of this Category Four storm turned out to be wildly optimistic. Within a week, nearly one million people had been uprooted from their homes, with families torn apart, living as refugees hundreds of miles away from home. The saddest aspect of all may be that these folks, traumatized though they were, were lucky to be alive, when so many others lost their lives in the floods and devastation.

As investors, we have to try to look past the terrible human impact of this story and focus on what this means for the US economy and, especially, the bond market. This is a nearly impossible task, not just because of the horror of what we’ve seen and heard, but because useful data is spotty due to the type of damage (so much is still underwater), and knowing how quickly certain repairs will take still involves a great deal of guesswork. Nevertheless, we will make an attempt, with more than the usual caveats that go along with our economic outlook.

The Gulf Coast of Alabama, Mississippi and Louisiana are typically known for leisure activities, with beautiful beaches, sport fishing, and more recently, casino operations. Even though these three states collectively contribute only 3% to US GDP, they have a very important industrial role. This is especially true of New Orleans and the ports south of the city along the Mississippi River.

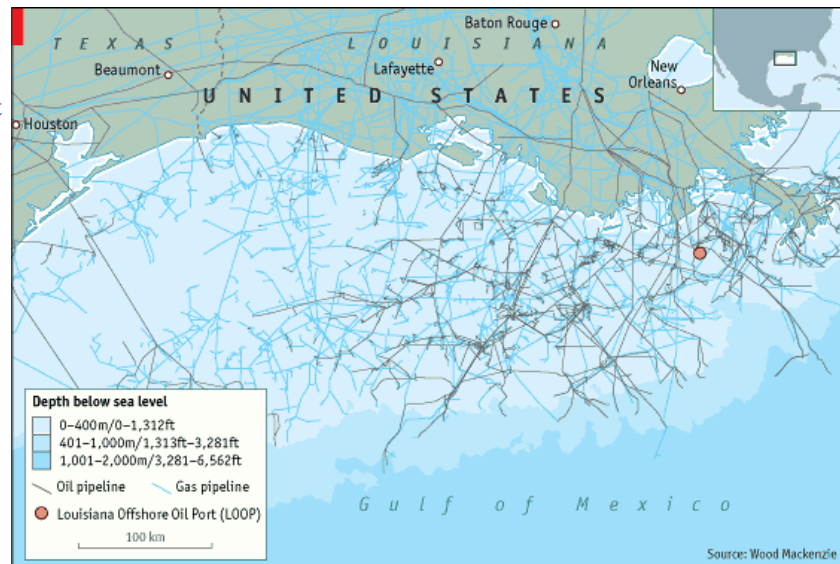
The (greater) Port of New Orleans is, by tonnage, the largest in the US and the fifth largest in the world. As it has for hundreds of years, the Mississippi River carries the vast majority of commodities and non-perishable agricultural products from the nation’s Midwest and plains states on ships and barges destined for overseas markets. Approxi-

mately 6,000 ocean-going vessels carrying an estimated 52 million tons of goods (including 25 million tons of grain and five million tons of steel) come into New Orleans each year. New Orleans handles approximately 71% of US corn and 65% of US soybean exports.

Perhaps even more importantly, the region is the largest energy-producing area in the country, responsible for approximately one-third of US oil and one-fifth of US natural gas production, and is a major hub for refining and distribution. Under normal conditions, approximately 1.5 million barrels of oil and 10 billion cubic feet of natural gas are pumped from approximately 900 platforms in the Gulf of Mexico each day. There are 15 refineries in the area which represent 18% of US refining capacity. Finally, there are 33,000 miles of pipeline in the region, most of it along the ocean floor, connecting the platforms, ports, refineries, and storage facilities.

The damage to the area’s infrastructure came from high winds, flooding, and a shifting seabed that destroyed underwater pipeline. Yet many facilities that suffered little direct damage from the storm were knocked out anyway due to the damage done to the power grid. Other refineries that were otherwise ready to be put back on line were shut due to a lack of crude oil supply, or due to damage at ports or pipelines that supplied crude oil. Refineries as far away as Indiana and Ohio were cut back or switched off due to disruption of crude oil supply. In the days immediately following the storm, the Department of the Interior’s Minerals Management Service reported that Katrina had shut down more than 90% of the Gulf of Mexico oil production and more than 80% of the Gulf’s natural gas production.

As others have commented, the timing of the storm couldn’t have been worse for the energy markets. US gasoline supplies were close to record lows, and global demand for energy had pushed crude prices to over \$60 per barrel, up



(Map reprinted from *The Economist*)



more than 50% from levels a year earlier. Refineries in the US were already running at 95% of full capacity in the weeks before Katrina hit.

In the days immediately following the storm, 11% of US refining capacity was lost—not a big number, but for a market already straining to meet demand, it was enough to send gas prices to well over \$3 per gallon, with scattered reports of some unscrupulous gas station owners charging \$5 and \$6 per gallon. Fortunately, within a week of the storm’s passing, roughly half of the lost refining capacity had been put back on-line. In addition, the Federal Government announced the release of stockpiled crude from the Strategic Petroleum Reserve, relaxed constraints on gasoline formulations, and asked foreign freighters to deliver fuel to East Coast markets to alleviate potential shortages. Many states lowered gasoline sales taxes at the pump.

Looking closer at the damage to the refineries that are inoperable or running at reduced rates, it appears that only three or four have major damage that will take more than a couple of weeks to fix. In the meantime, we’re missing only 4% of normal petroleum refining capacity. Crude and gasoline prices have fallen from their highs, as it appears that a crisis in the region’s refineries has been avoided.

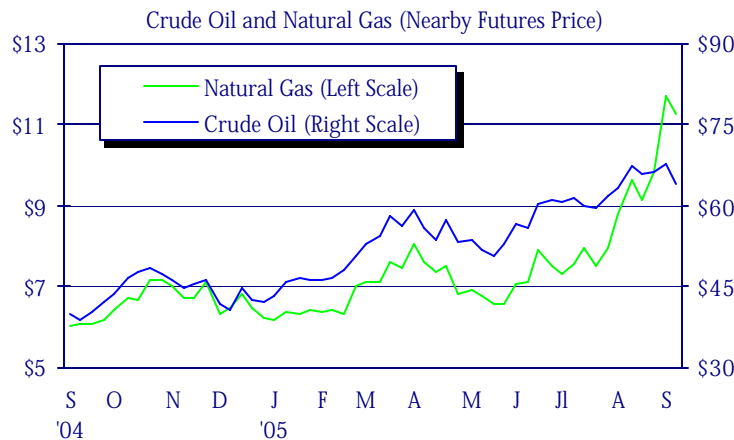
The outlook for natural gas is not so positive. As of the second week of September, more than 40% of the natural gas production in the Gulf was still offline. There’s considerable damage to the pipelines carrying gas from the rigs to the onshore facilities. As was the case in the oil market, the natural gas market was tight before Katrina; yet unlike the petroleum industry—and this is a critical difference—there is no strategic natural gas facility to draw on; natural gas storage in the US is limited to a few underground sites that are used only to buffer seasonal demand. Natural gas facilities, even those unscathed by the storm, are idle due to a lack of raw material.

The futures markets reflect the differences between crude oil supply and natural gas. As the chart on this page shows, while crude oil prices have been moving up steadily over the past year, natural gas prices have been quite stable until this summer, and have jumped more than 25% since Katrina.

The probable net effect of this storm will impact the US economy on two main fronts: Slowing growth and rising prices.

The disruption of the energy markets, as well as closing of ports and other forms of transportation in the region will suppress third and fourth quarter GDP. Already, in the first week of September, US consumers reduced gasoline purchases by 4%. Payrolls are expected to shrink by as much as 400,000 as a result of displaced workers and damaged facilities and infrastructure. Consensus surveys of economists show a reduction in third and fourth quarter GDP of 0.6% and 0.4%, respectively.

The good news is that this slowdown in GDP should prove to be temporary, as the Federal government has already pledged more than \$60 billion in recovery funds for the destruction caused by Katrina. This huge influx of money will stimulate economic growth as we move into next year, as thousands of homes and businesses must be rebuilt in the region, not to mention repairs to utilities, roads, schools and other facilities. This promises to be the largest rebuilding program in the US since the San Francisco earthquake 100 years ago.



Consumer prices will certainly rise as a result of the damage to the US energy sector. Even though the service-driven US economy is not as energy-dependent as it was in the 1970’s, the cost to transport goods just went up. Likewise, the cost to heat an office building, run a manufacturing facility, fry a hamburger, light a dormitory, or mow your lawn is suddenly more expensive than it was just a couple of weeks ago.

While we don’t think businesses will be able to pass all these increased costs through to consumers, we expect that some significant portion may end up reflected in higher consumer prices.

Our “base case” scenario calls for a resumption of above trend economic growth by early 2006. The lost productive capacity caused by Katrina should be repaired over the next few months, especially with the Federal Government ready to supply whatever resources and rebates seem necessary. Yet there is a non-trivial possibility that price increases cut into consumer’s discretionary income to such an extent that spending slows and pushes the economy towards recession. Deutsche Bank estimates that energy bills for the average family are likely to go up by \$70 per month by the end of 2005, and will be higher in colder areas of the country. While the natural gas processing and distribution system are under repair, the cost of heating one’s home could skyrocket if, for instance, we have an unusually cold winter.

