The Northern Trust Company
Economic Research Department

Positive Economic Commentary

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September 6, 2005

Hurricane Katrina – A Supply Shock Interacts With Preexisting Demand Restraint

Hurricane Katrina is likely to end up being the most economically-disruptive U.S. natural disaster in years. The reason for this is that the nation's energy production has been reduced for some uncertain time and its water freight transportation has been disrupted. The Gulf of Mexico accounts for 30% of our oil production, 23% of our natural gas production and about 10% of our petroleum refining capacity. A significant amount of crude oil, natural gas and gasoline production has been halted by the hurricane with uncertainty as to when production will come back on line. There are major pipelines in the New Orleans area through which are shipped fossil fuels to the East and Midwest. Lack of power and damage have reduced the transmission of energy through these pipelines. The Port of South Louisiana is the largest port in the U.S. by tonnage and the fifth largest port in the world. The Port of New Orleans is the sixth largest port in the U.S. We export about a quarter of our agricultural grain production of which about a half is shipped through the ports at the mouth of the Mississippi River. Imports coming into the Ports of South Louisiana and New Orleans include petroleum products, steel, coal, chemicals, fertilizers and concrete. These ports are closed now. Our rail freight system already was operating at high rates of capacity utilization before Hurricane Katrina struck. Therefore, the transport of grain and other bulk freight by rail to other ports will strain the capacity of our rail system. Moreover, with the rise in the price of diesel fuel, the cost of rail-freight transport will increase. In addition, some non-Mississippi River ports already are operating near capacity. Lack of manpower to operate ports, pipelines and refineries in the New Orleans area also is likely to be an issue. Evacuated workers do not have homes to come back to and essential services to sustain them and their families. **In short, Hurricane Katrina has temporarily constrained our economy's ability to produce goods and services.** How long this constraint will persist is unknowable at this time.

The Federal Reserve has been raising short term interest rates since late June 2004 through early August 2005. The Fed has pushed up the overnight cost of funds by 250 basis points over that time period. As I discussed in our August economic forecast commentary, "Trust Your Compass" http://www.northerntrust.com/library/econ_research/outlook/us/us0805.pdf, **leading economic indicators related to monetary policy – real M2 money supply growth and the yield spread between 10-year Treasury securities and the fed funds rate – are suggesting a further moderation in the pace of economic activity due to reduced aggregate *demand*.** I say "further" moderation because the trend in real GDP growth already has slowed. Year-over-year real GDP growth in Q2:2005 was 3.6%. This was down from 4.6% in Q2:2004. Recent data pertaining to activity prior to Hurricane

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Katrina's disruptive effects indicate still further moderation in aggregate demand growth. To wit, August nominal retail sales almost assuredly will post a large decline because of a seasonally-adjusted 19% drop in motor vehicle sales and lackluster back-to-school sales. Pending sales of existing homes fell by 1% in July. The nominal value of private construction spending has contracted at an annual rate of 1.5% in the three months ended July. The ISM composite manufacturing index fell by three points or 5.3% in August – the largest one-month decline since March 2003. The University of Michigan Consumer Sentiment index fell 7.7% in August, the largest decline since February 2004.

Over the next several quarters, then, there will be two forces acting toward suppressing GDP growth. One force is from the supply side, due to the effects of Hurricane Katrina. The other force is from the demand side, due to Fed-tightening of monetary policy. **This does *not* necessarily mean that the two forces acting to restrain GDP growth are additive.** For example, if Hurricane Katrina's negative supply-side effects would reduce real GDP growth over the next several quarters by one percentage point and the Fed's tightening would reduce aggregate demand growth also by one percentage point, then real GDP growth would only slow by one percentage point – not two percentage points. Rather, the Fed's actions to reduce aggregate demand growth in the face of reduced aggregate supply growth of the same magnitude would restrain the inflationary implications of reduced aggregate supply. Thus, counterintuitive as it might seem, **the tightening of monetary policy *ahead* of Hurricane Katrina was fortuitous in that it will help restrain the higher inflation that otherwise would have occurred.** Whether the reduction in aggregate-demand growth already in progress exactly offsets the reduction in aggregate-supply growth that lies ahead is beyond my knowledge.

The conventional wisdom is that the contractionary-growth implications of Hurricane Katrina are from the demand side, not as I have argued, from the supply side. (Since the Keynesian "revolution," almost all slowdowns in output growth are thought to result from insufficient aggregate demand.) Monetary policy affects aggregate demand, not aggregate supply. **The creation of credit by the Fed, just like the scrip printed by a counterfeiter, does not result in the increased supply of energy.** Rather, it results in the increased demand for energy – either directly or indirectly. So, **recommendations that the Fed pause in its interest rate increases might be misguided** unless the slowdown in aggregate demand already in the "pipeline" were to significantly exceed the coming slowdown in aggregate supply emanating from Hurricane Katrina.

An estimate by Risk Management Solutions, an outfit in Newark, California, is that Hurricane Katrina caused $100 billion of damages, perhaps two-thirds of which were uninsured. The insured/uninsured distinction is not particularly relevant from a macro-economic perspective. In order to pay claims, insurance companies will have sell assets. In effect, this means that the demand for funds will rise. Individuals and businesses with uninsured losses will cut back on their saving/increase their borrowing in order to rebuild. Congress has quickly authorized the expenditure of $10.5 billion in emergency aid in the wake of Hurricane Katrina's destruction, with additional sums likely to follow given the magnitude of uninsured losses. Because taxes are not going to be increased, these hurricane-related federal expenditures represent an increased demand for credit. All else the same, **this increased demand for funds from the private and government sectors would put upward pressure on the structure of interest rates. But if the Fed does pause in its short-term interest rate increases, then a large part of this increased demand for credit will be accommodated through the commercial banking system with the Fed providing the "seed money." Again, this would increase aggregate demand, not**

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aggregate supply. Therefore, a Fed rate-hike pause in the face of increased hurricane-related credit demand would impart an upward bias on inflation.

Will the Fed pause in its interest-rate hikes? I think so. **I believe that the FOMC will hold the fed funds rate steady at 3.50% at its upcoming September 20 meeting**, leaving open the option to resume rate increases once better information is known about the extent of the disruption to economic activity caused by Hurricane Katrina. I sense that the Fed believes that "temporary" shocks to aggregate supply should be accommodated by monetary policy.

The reaction in the financial markets this past week to the prospect of a Fed pause may provide some insight into how long the Fed can keep policy on hold. The trade-weighted U.S. dollar fell to its lowest level since May, as shown in Chart 1. Chart 2 shows that there is an inverse relationship between the rate of change in the trade-weighted dollar and the rate of change in the prices of imported consumer goods. So, all else the same, a weaker dollar could be expected to result in, with a lag, higher prices for imported consumer goods. So, **if the Fed does pause in its interest rate hikes for an extended period of time, the dollar could fall more, setting up the prospects for higher imported core inflation**. Moreover, with energy prices having jumped to new highs and the expectation that they will not subside significantly in the near term, there could be greater pass-through of these prices into non-energy prices. Thus, **the Fed could face a difficult policy environment in several months – sluggish economic growth with rising core inflation.**

Chart 1

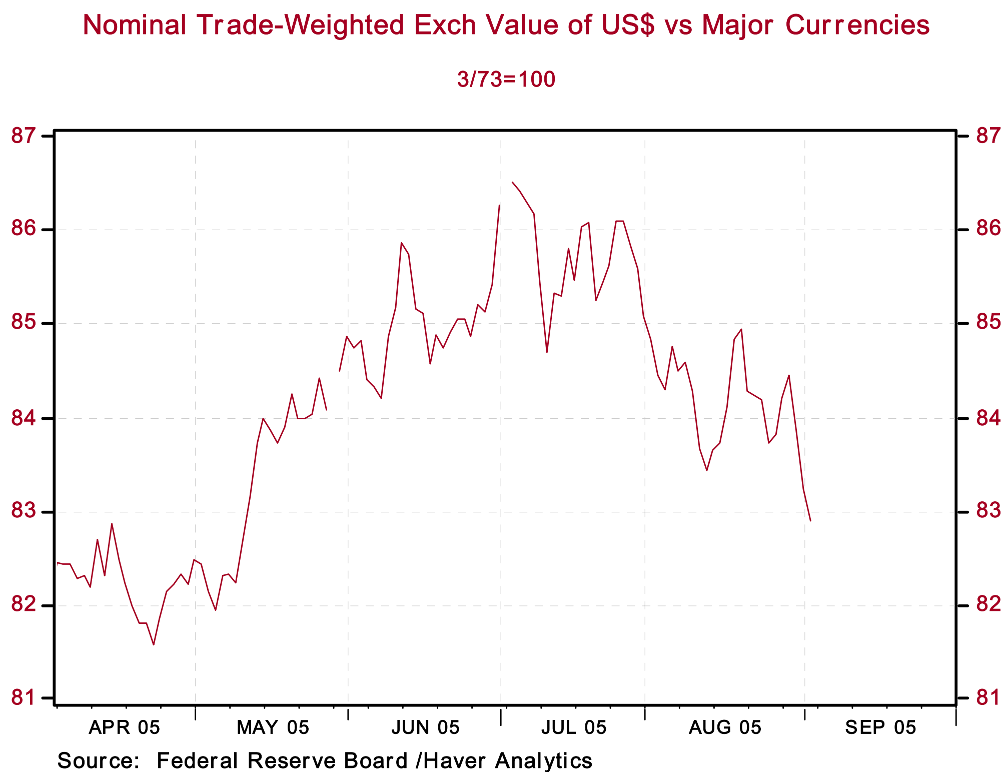

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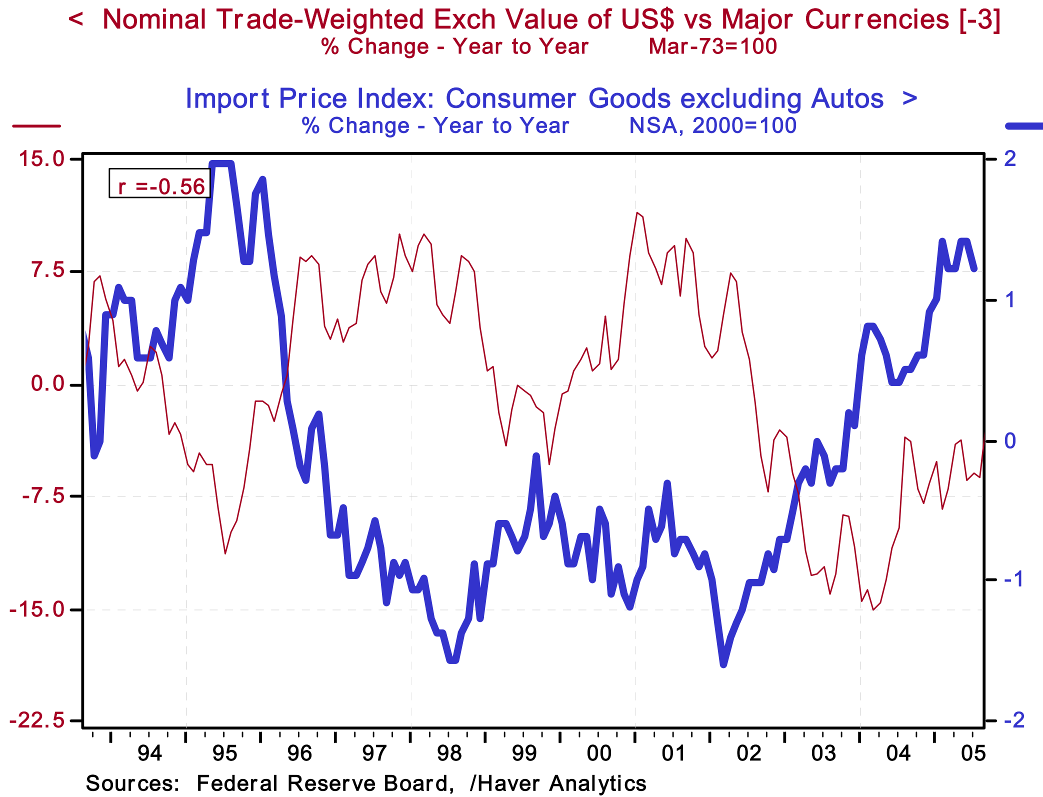
Chart 2



Finally, the negative supply-side shock to economic growth emanating from the destruction caused by Hurricane Katrina is bad news for an U.S. housing market bubble. **To the degree that personal income growth is constrained nationwide, already debt-burdened households will find it more difficult to make their monthly mortgage payments *and* purchase necessities**, much less luxuries. This could set in motion a slow-motion rise in mortgage defaults.

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