Economic Update

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We believe that (1) global growth is slowing but will not deteriorate into a global recession, (2) the U.S. financial crisis has crossed the inflection point from disorderly deleveraging to orderly deleveraging, but the availability of credit to support new economic expansion is only gradually recovering, (3) the recent oil price upsurge was largely due to fundamentals, but the price of oil has probably now reached the upper part of its likely trading range and should begin to ease down somewhat, (4) the U.S. is in a prolonged period of subpar economic activity, and (5) the global upsurge in inflation should persist longer in emerging market countries (especially those with undervalued currencies, oil and food subsidies, and expansionary monetary and fiscal policies) than in the major developed countries.

We attribute the surge in crude oil prices towards $140 per barrel largely to supply/demand fundamentals. We believe that a cyclical erosion of energy price fundamentals is finally underway as the global economy slows. During what was probably the strongest half-decade of global economic expansion in the history of the world, energy demand grew faster than energy supply. Energy supply increased slowly due to multiple factors, including energy subsidies, geopolitical disruptions and resource nationalism, which limited opportunities to use the best technology to expand supply. According to estimates by BP, world oil production dropped 0.2% and world oil reserves dropped 0.1% in 2007.

A shifting mix of global growth added to demand. In recent years, global economic growth has been led by countries where energy subsidies were widespread and economic expansion raised the proportion of the population with substantial income. In these countries, including many emerging market and OPEC countries, strong income growth triggered strong increases in energy consumption. We believe that a major cause of the multiyear uptrend in energy prices was the shift in the focus of global growth away from advanced industrial countries (where energy demand patterns were more mature and energy price subsidies less prevalent) to emerging and OPEC countries with rapidly rising incomes. This continuing trend in the mix of global growth should contribute to a substantially higher trading range for real energy prices than prevailed in prior decades. We believe that we are now near the upper end of that trading range, barring any new military action in the Middle East that would disrupt energy supplies. We do suspect that the most recent upsurge in energy prices may have been attributable in part to behavior triggered by the perceived risk of wider military action in the Middle East.

While energy subsidies are starting to be reduced in some countries, there will be limited pressure to make major reductions in energy subsidies in OPEC oil exporting countries and non-oil exporting countries with large current account surpluses. More substantial cuts in energy subsidies can be expected in the subset of countries where it is harder to sustain the subsidy costs.

With expectations that high oil prices will persist in the future, oil-producing countries feel limited motivation to expand production. These expectations of high future oil prices are underpinned by energy policy gridlock in the U.S. and other energy importing countries. Hoarding undeveloped and potential energy reserves underground is appealing to energy-rich countries as long as consumer country energy policies remain tentative, sustaining expectations of high future oil prices. The U.S. has been timid in adopting either the aggressive policies to expand domestic energy supply favored by many on the political right or the aggressive policies to limit domestic energy demand and to accelerate the development of new energy sources favored by many on the political left. This bipartisan political gridlock has persisted for several decades and is likely to change only gradually. However, the massive wealth shift from oil consuming countries to oil exporting countries is likely to increase pressure for fundamental changes in energy policy. Long term, the outlook is relatively favorable for changes in policy and behavior, facilitated by technological innovation, which will slowly rebalance the supply and demand for energy. In the meantime, decisions to expand domestic energy supply are being postponed due to uncertainty about future energy policy changes.

In the near term, we expect the next stage to be a weakening of energy demand in response both to the economic slowdown (especially in the industrial countries) and to the rise in energy prices. It is true that the short-term response (elasticity) of demand to energy price changes tends to be relatively low. However, this price shock has been large and it has occurred in a context where growth has already slowed in the U.S., Japan, the U.K. and parts of Europe. The energy price shock should lead to some weakening of consumer demand, especially in the industrial countries and in those countries that choose to reduce their energy subsidies. Lower subsidies would permit energy price signals from the free markets to reach their consumers and manufacturers.

We believe that the most recent spike in energy prices has been rapid enough to generate some behavioral change among consumers. In addition, while production processes already tend to be energy-efficient in industrial economies, energy-inefficient production processes may now begin to be tightened up in emerging countries that have not previously made it a priority. In addition, global trade patterns may begin to shift in response to substantially higher transportation costs.

What about global inflation? We believe that global inflationary forces are powerful, but that the inflation acceleration risk should prove temporary in the major industrial countries where wage disinflation is more likely than accelerating wage inflation. From a domestic U.S. perspective, a temporary phase of negative real short-term interest rates is appropriate for a weak U.S. economy with a vulnerable financial system, although the Fed has started to indicate that this cannot be a permanent policy. Negative real interest rates are much less appropriate to other parts of the global dollar bloc. Many important emerging market and OPEC countries have undervalued currencies, easy monetary and fiscal policies, food and energy subsidies, and strong real and nominal GDP growth. It creates inflation risk for them to import U.S. monetary policy via exchange rates fixed or linked to the dollar. Even after the short-term food and energy shocks have run their course, many of these emerging market and OPEC countries may experience a longer-term upward drift in their trend inflation rates.

What about the U.S. monetary policy outlook? The Fed now faces multiple simultaneous risks: (1) financial system risk, with collateral deflation in housing, cyclical credit losses, strained balance sheets among financial intermediaries and tight lending conditions for new borrowing, (2) economic risk, currently somewhat mitigated by tax rebates, (3) inflation risk, as higher oil and food prices are driving headline inflation higher, (4) inflation expectations risk, as high inflation and a depressed dollar raise the risk of an upsurge in long-term inflation expectations, (5) currency risk, as any further major decline in the depressed dollar could trigger volatility in markets, inflation expectations and international financial and trade relations, (6) credit risk, as the Fed has dramatically increased its lending on private sector securities (albeit high quality securities), (7) moral hazard risk, with new permanent rules for access to Federal Reserve funding still a work-in-progress, and (8) policy independence risk. The Fed has no easy task in balancing this “risk octagon” of financial system risk, economic risk, inflation risk, inflation expectations risk, currency risk, credit risk, moral hazard risk, and policy independence risk. Different Fed officials and private analysts have concentrated on one or more of these risks, but Fed policy must be designed to balance all of them. The

Fed's focus now appears to be shifting from financial system risk towards inflation expectations risk. The Fed has shifted its verbiage about the relative risks of severe economic weakness versus rising inflation. This lowers the odds of further easing, but we are less convinced than the market seems to be that they will soon act to raise interest rates.

The U.S. has rarely had an active dollar policy. Rather, it has a derived dollar preference based on the impact of the dollar on domestic economic variables such as inflation, inflation expectations or economic growth. It is such domestic variables rather than the dollar's currency value itself that are the key priorities of U.S. policymakers. Chairman Bernanke stated on June 3, 2008 that "…we are attentive to the implications of changes in the value of the dollar for inflation and inflation expectations and will continue to formulate policy to guard against risks to both parts of our dual mandate, including the risk of an erosion in longer-term inflation expectations." On June 10, 2008, Chairman Bernanke stated, "The Federal Open Market Committee will strongly resist an erosion of longer-term inflation expectations, as an unanchoring of those expectations would be destabilizing for growth as well as for inflation." We interpret this to mean that the Fed is becoming increasingly worried that the combination of price shocks from food and oil plus a weak dollar could trigger an upside breakout in long-term inflation expectations. Long-term inflation expectations in the Michigan survey have broken out to multiyear highs and one can detect concern about inflation risk in recent speeches not just by Chairman Bernanke and other Fed governors, but also by a number of the Federal Reserve Presidents, including Richard Fisher of Dallas, Charles Plosser of Philadelphia, Jeffrey Lacker of Richmond and Timothy Geithner of New York. Our view is that the shift in the Fed's attitude about economic risk, inflation risk, inflation expectations risk and dollar risk does not imply that an early tightening of U.S. monetary policy is inevitable or even the most likely case, but that it does lower the odds of a further cut in the Federal funds rate even if economic data remain weak.

There are four key reflationary policy tools in the U.S., only one of which tends to contribute to dollar weakness: (1) cuts in the Federal funds rate, (2) an alphabet soup of Federal Reserve programs to lend to private sector financial firms, (3) traditional fiscal stimulus, and (4) foreclosure/refinancing policy. The drop in the Federal funds rate from 5.25% to 2% contributed to the dollar weakness over the last year. Further interest rate cuts would be the reflationary policy most likely to generate further dollar weakness by an adverse shift in current and expected future yields in the U.S. relative to foreign yields. That risk would be increased if foreign central banks such as the ECB raise their interest rates, as they have been contemplating. We believe the Fed will now stop cutting rates and focus market attention on the timing of its first tightening, given that Chairman Bernanke went out of his way to announce that "…the risk that the economy has entered a substantial downturn appears to have diminished over the past month or so...the latest round of increases in energy prices has added to the upside risks to inflation and inflation expectations." Hawkish statements by Fed officials have raised the expected future Fed funds rate. This has helped interrupt the dollar downtrend.

The Fed's alphabet soup liquidity policy (TAF, TSLF, PDCF) is arguably supportive of the dollar by lowering the odds of a worsening financial crisis and of greater economic weakness. The traditional fiscal stimulus (tax rebates and favorable depreciation changes) can be regarded as a partial substitute for further interest rate cuts by the Fed in stimulating the U.S. economy. Finally, foreclosure/refinancing policy designed to limit foreclosures through the use of Federal credit or guarantees can also act as a substitute for further interest rate cuts by mitigating both house price deflation and financial stress. It is crucial to understand that a U.S. preference for an end to the dollar decline does not imply much willingness to absorb further economic pain to defend the currency. However, it may influence the choice of reflationary tools, lower the odds of further interest rate cuts, and eventually generate a bias to tighten.

There is a fifth reflationary mechanism, one that is in the private sector. New equity offerings by financial firms under stress often dilute existing shareholders, but they also lower the risk of bankruptcy for the firm and lower the odds of a systemic financial meltdown. In calming the financial stress, they can be a substitute for reflationary interest rate reductions or other reflationary policies.

We do not believe that U.S. inflation expectations are well-anchored anymore. Inflation expectations threaten to break free from their moorings if there are further substantial falls in the dollar or further sustained surges in oil prices. Fortunately, we expect cyclical forces to eventually calm these upward pressures on inflation expectations. Our view is that there are favorable odds that inflation expectations can be re-anchored over the next year as we expect both core and headline inflation to decelerate in response to growing excess capacity, rising unemployment and probably a more stable dollar.

In the U.S., headline inflation, including food and energy, continues to run higher than core inflation, excluding food and energy. The Fed's "comfort zone" of 1% to 2% for core PCE inflation is focused on inflation excluding food and energy. The logic of excluding food and energy prices was that they were volatile and that core inflation was a better measure of trend. But rather than volatile fluctuations around a neutral trend relative to other prices, food and energy prices have inflated at a persistently faster rate than core inflation in recent years. The Fed has not changed its "comfort zone" from core inflation to headline inflation in response. However, it has begun to provide explicit Fed forecasts, not just for core inflation, but for both headline and core inflation. We regard this as a concession by the Fed that the internal and external critics of a primary focus on core inflation may have a valid point. It makes sense to monitor both measures carefully, especially in an environment where rising food and energy prices are persistent sources of upward pressure on inflation. In addition, it makes sense to monitor other indicators of trend inflation, including the Cleveland Fed median inflation indicator and the Dallas Fed trimmed-mean inflation indicator. Both indicate that trend inflation has drifted higher but has not yet experienced a major upsurge. This provides some support to our thesis that headline inflation is likely to drop down closer to core inflation over the next year or two, rather than core inflation rising closer to headline inflation.

As of its April 30, 2008 FOMC meeting, the Fed forecast a temporary overshoot above its "comfort zone" in the core PCE inflation rate at 2.2% to 2.4% for the four quarters of 2008 followed by a deceleration to 1.9% to 2.1% for the four quarters of 2009. The Fed also forecast headline PCE inflation at 3.1% to 3.4% for the four quarters of 2008 followed by a deceleration to 1.9% to 2.3% for 2009. We think their forecasts for core inflation are realistic given wage disinflation, rental disinflation and high productivity growth. We expect headline inflation to peak by this fall before dropping substantially in 2009. Subsequent to the April 30 meeting, Chairman Bernanke commented in his June 10, 2008 speech that "…the latest round of increases in energy prices has added to the upside risks to inflation and inflation expectations," so the Fed's current inflation forecast has probably been revised upwards.

With respect to financial system risk, we regard the current crisis as one of the most challenging of the postwar financial crises. Our view is that the inflection point of the financial crisis occurred after the forced liquidation of Carlyle Capital and the Fed-sponsored Bear Stearns' intervention. Fears of a disorderly wave of forced liquidations of hyperleveraged financial entities and of a counterparty risk cascade began to calm once the Fed acted in mid-March 2008. Thanks to ample global liquidity, stressed financial firms were able to obtain equity financing to replace a major portion of their losses. In our opinion, we are still in a financial crisis, but have made the transition from disorderly deleveraging to orderly deleveraging.

We believe that systemic financial risk has dropped and the financial system is on a path of recuperation. However, the availability of credit to finance new economic activity is still restricted, as indicated by the Fed's Senior Loan Officer Survey. A major portion of the securitized financial system has been reintermediated back into the traditional banking system. Objectively, this has lowered systemic financial risk, since the traditional banking system has higher equity requirements and more dependable access to Federal Reserve credit in accordance with long-established precedents. However, the reintermediation has absorbed risk budget capacity now that these loans have moved back onto the books of the traditional banking system, where there are both regulatory requirements for capital and transparent financial reporting. The leverage in the total financial system is being reduced as the most leveraged portion of the total system (the securitized financial system) is starting to reintermediate back into the less leveraged portion of the system (the traditional banking system), but this process is stretching bank equity and risk budgets and is somewhat restraining the availability of credit to finance new economic activity. In a sense, part of Fed ease is being absorbed by a fall in the "new credit multiplier" during a phase when financial firms are still trying to deleverage. Our best guess on the timing of a phase shift to a rising "new credit multiplier" would be about the spring of 2009, coincident with a low in house prices.

Our view is that risk budgets of the traditional banking system are being absorbed by old loans coming onto the balance sheet and by the obligation to fulfill old loan commitments not yet drawn down, leaving limited risk appetite to add loans to finance new economic activity. Of course, demand for credit to finance new economic activity is also cyclically weak. With a weakness in both the supply of credit and the demand for credit to finance new economic activity, it is realistic to expect slow credit growth.

There are additional concerns that add to a rational reluctance by financial intermediaries to add substantial new risk exposure. First, banks need to anticipate future credit losses of the old-fashioned kind. A cyclical rise in credit losses on auto loans, commercial loans and many other categories would be traditional in response to economic weakness, an oil-price shock and a rising unemployment rate.

We also expect risk managers to worry about the risk of a premature tightening by the Fed of the alphabet soup liquidity provisions (TAF, TSLF, PDCF). However, we believe the Fed will be realistic about the financial dangers of such a move. Risk managers are also likely to worry about a pro-cyclical tightening of regulatory standards and accounting standards, which could postpone the easing of credit conditions. In this context, risk-averse lending behavior by the financial sector is likely to ease only gradually over the course of time.

The past easing moves by the Fed should eventually contribute to easier credit availability. The steep yield curve has improved the marginal profitability of expanding new credit, so the preconditions for gradual improvement in the availability of credit are now in place. We expect a gradual persistent trend of recuperation in the financial sector, with a falling risk of a systemic meltdown.

What's the outlook for the U.S. economy? The most likely outlook is for a prolonged period of subpar economic activity in a choppy pattern influenced by financial stresses, tax rebates, oil-price shocks, etc. Will this be labeled a recession by the NBER at some point in 2009? Maybe yes. Maybe no. Even if it is eventually labeled a recession based on future revisions of monthly indicators (on balance our most likely case), we expect that the peak-to-trough decline should be at the shallow end of the postwar recessions. Large portions of the subpar economic activity should occur prior to the business cycle peak or after the business cycle trough. Residential construction declined for eight quarters prior to the plausible economic peak in late 2007. Once the temporary tax rebate has run its course, subpar consumption growth due to the negative wealth effect from house price declines should last well past any economic trough. Note that the recent Fed calculations of the drop in household net worth underestimate the size of the drop because they are based on the house price indices that undercount those houses that were financed by troubled mortgages.

As the U.S. economy has become more of a service economy and has outsourced much of its industrial cyclicality to foreign suppliers, it is harder to generate large peak-to-trough declines in economic activity than it is to generate an extended period of subpar economic activity. The 2001 recession was a mild recession measured by the peak-to-trough decline but it was accompanied by severe asset price decline in technology stocks. In 2008, we expect a shallow recession (most likely) or growth recession (somewhat less likely) combined with a severe decline in residential construction and house prices. It is dubious whether "mild" is the appropriate description of such a combination even with a smaller-than-normal peak-to-trough decline in economic activity, since there should be substantial economic weakness outside of the period of actual economic decline.

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