Economic Update

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What has changed? The key change was that the trend towards a gradual easing of the credit crunch was interrupted by renewed stresses in the financial sector. As a result of these renewed credit crunch stresses, recession now appears more likely than a growth recession.

Until the most recent shock, there had been definitive signs of an easing of stresses in the money markets, with LIBOR spreads and other indicators improving after the joint central bank actions on December 12, 2007. There were much more tentative signs of progress in rebuilding the balance sheets of major financial institutions which had been forced to make major writeoffs. Dilutive equity offerings, while painful for existing shareholders, did help restore the equity capital base of institutions under stress. However, renewed stresses in the financial sector increase the odds that additional steps to rebuild the balance sheets may be required.

Major financial institutions have been re-intermediating a large volume of existing loans, such as structured investment vehicles and LBO loans, onto their balance sheet. The reintermediation of existing loans has used up much of the risk budget capacity of major financial institutions. As excess risk capacity has been allocated to old loans, there are increasing limitations on the supply and price of new loans, especially since the Fed has been "behind the curve" in its easing. With the announcement of a 75-basis point cut to a 3.5% target Fed funds rate on January 22, 2008, the Fed has finally shifted to a more proactive stance. Central bank easing should eventually create a calming of the credit crunch, but not before the financial stresses generate two or three quarters of economic weakness. The credit crunch is the key to the economic outlook. A combination of monetary ease, fiscal ease and dilutive equity offerings should eventually calm the credit crunch. A transition from liquidity hoarding to liquidity release should eventually occur, as it has in past cycles.

What is likely to occur in the markets? The Treasury bond market has already discounted much of the economic weakness and Fed easing likely to take place. However, other parts of the bond market have lagged to date because of credit risk fears. Future performance in the bond market is likely to be highly differentiated between different bonds, some of which have overdiscounted future credit events and some of which have underdiscounted future credit events. Compensation for taking on risk has become more adequate now that the markets are no longer ignoring potential credit risks. In the stock market, we also expect a very differentiated outcome. After a multiyear uptrend in stock prices, the relative market price of low quality assets became quite extended relative to high quality assets. That should now change, as the long term earnings prospects of high quality franchises are likely to be minimally impacted by cyclical weakness while lower quality business franchises are likely to prove quite vulnerable in a more challenging environment. Historically, the stock market usually declines in the early phase of a recession and begins to rise before the end of the recession, as it begins to discount future economic recovery.

We believe that there are four big questions. First, how bad will the housing recession and house price decline be? We believe that they will prove severe. Second, is the credit crunch past its worst? That remains uncertain and is likely to depend on the magnitude of further writedowns required. Third, will the subprime credit crunch and housing recession generate a recession or only a growth recession? Following the most recent financial shocks, the six to nine month period of weak economic activity we expect is somewhat more likely to be labeled a recession than a growth recession. Fourth, can there be a decoupling of emerging market expansion from the developed world slowdown? There is negligible "financial decoupling" during a credit crunch and the longer the credit crunch persists, the less likely "economic decoupling" should prove to be. The developed countries, whose financial systems are so tightly linked, are likely to have correlated cyclical trends.

In 2008, we expect a slowdown in the global economic growth rate of about 100 to 120 basis points below the strong world growth rate that has prevailed over the last half decade. Two opposing financial forces are already at work in the beginning of 2008: strong global liquidity growth and the credit crunch in key industrialized countries. In addition to global liquidity and the credit crunch, there is beginning to be a third financial force--central bank easing--whose full impact will only be felt with a lag.

Multiple indicators of economic weakness have already surfaced in the U.S., Canada, U.K. and Japan and are beginning to emerge in Continental Europe. Central banks have either begun easing (U.S., U.K., Canada) or have put planned tightening steps on hold (Europe, Japan). With the exception of Japan, these countries are at the normal temporary phase of the business cycle when economic growth has already slowed but inflation indicators remain near their cyclical highs in a lagged response to past macroeconomic stimulus and growth. We believe developed country inflation rates will eventually follow the economic growth rates down with a lag. Continental Europe entered the economic expansion after other developed regions. In Continental Europe, the growth slowdown, eventual inflation slowdown and potential monetary ease are all likely to somewhat lag the deceleration in the U.S., U.K. and Canada. Japan is a separate story. Although it has only limited involvement in the subprime credit crunch, its domestic demand has proved fragile. It has entered its own separate slowdown due to weak consumer demand, regulatory mistakes and weakening export prospects to the U.S.

The emerging countries are generally in a somewhat different cyclical phase. They have had stimulative macroeconomic policies. Exports have been growing strongly for industrial goods, intermediate goods and commodities. They have a near-term risk of high inflation, as many have lagged in tightening their policy. Given that many of these countries link their domestic monetary policy in part to U.S. monetary policy via inflexible exchange rates, easing monetary policy in the U.S. and other industrial countries reinforce accommodative macroeconomic policy in these countries. Some countries with inflexible exchange rates are "behind the curve" in resisting accelerating inflation. The longer-term risk is that "catch-up" anti-inflationary policies in the developing countries plus a lagged spillover from the developed country slowdown could dampen their prospects later in 2008.

Will the emerging market countries decouple from the developed country slowdown? Many emerging countries have strengthened their external balance sheets via strong exports in recent years and have minimal direct exposure to the U.S. mortgage crisis. However, a U.S. recession would tend to prolong the developed world credit crunch and weaken U.S. consumer goods imports. A recession would tend to (1) increase financial losses from the housing recession, (2) prolong the credit crunch, (3) reduce U.S. imports, (4) export economic weakness to Europe and elsewhere, and (5) increase fears of trade tensions which could lower confidence in future global expansion. These risks intensify the pressure for quick monetary and fiscal stimulus, which should create the preconditions for a recovery in late 2008 and 2009.

Among the emerging countries, there are two broad categories. Expansion in some is driven by strong gains in productivity as a rising proportion of their labor force is tooled with modern technology and business practices, benefiting from the cumulative intellectual capital of the last several centuries. While growing exports to developed countries have aided this process, some slowdown in exports is unlikely to halt this productivity engine of economic expansion. The other category of emerging countries consists of the oil and materials exporters (such as OPEC and Russia). In 2008, we expect a moderate cyclical weakening in the uptrend in oil and metals prices as world economic growth slows. The weaker the developed countries are, the greater the risk of a substantial spillover to the emerging countries and a resultant fall in non-agricultural commodity prices.

In evaluating the weakness in the U.S. economy and the associated credit crunch, we distinguish between (1) the housing recession, (2) collateral deflation in housing, (3) funding stresses, (4) bank capital stresses, (5) the availability of mortgage credit, and (6) the availability of non-housing credit. We expect that the most likely unfolding sequence will be (1) some calming of funding and bank capital stresses by mid year 2008, (2) a further sharp drop in residential construction and construction employment until mid-2008 followed by stagnation thereafter in an L-shaped pattern, (3) a crest in mortgage defaults near the end of 2008, and (4) a persistence of house price deflation into 2009.

In many past cycles, both the housing recession and the overall recession were joint effects of the same cause: an upward spike in interest rates to a well-above-normal level. In this cycle, the housing recession is the lagged effect of interest rates that were unsustainably low. This contributed to a collapse in mortgage credit discipline and an upsurge in house prices to levels that undermined affordability. The U.S. homeownership rate spiked above 69% when mortgage credit was easy but has already begun to decline even before the major wave of expected foreclosures has fully begun. Work by researchers at the Federal Reserve of Boston (Working Paper 07-15) has shown that foreclosures are highly sensitive to changes in house prices. With house prices falling, foreclosures are destined to rise over the next year.

There has been some rebound in affordability for those borrowers who can be financed by conforming mortgages insured by Federal agencies, but affordability has deteriorated for other borrowers. The potential for large declines in mortgage rates is less than in past cycles because interest rates never overshot on the upside to begin with. For those ineligible for conforming mortgages, affordability remains worse than standard affordability measures based on conforming mortgages currently show. The credit crunch has nearly shut down the origination of subprime and Alt-A mortgages. In addition, the mortgage rates offered on jumbo loans to prime-quality borrowers are still high since risk spreads have widened. Terms and costs have tightened for a variety of mortgages. It is notable that house price declines have been steeper in the Case-Shiller measures (which include houses with non-conforming financing) than with the OFHEO measures (which only include houses financed with conforming mortgages). Mortgage availability is not very supportive for the housing market.

The Census Bureau has published quarterly statistics on vacant home inventories for the last half century. They show inventories of vacant homes at 2.7% of the housing stock, well above the normal range of 1.6% to 1.8%. Builders are under intense pressure from their lenders due to the credit crunch and their profit margins have been stressed by weak demand and excess inventories. As a result, building permits and housing starts are dropping sharply. We expect this pattern to persist over the next half year until they reach extremely low levels by mid-2008. Given the problems with affordability, excess housing inventories, and mortgage credit availability noted above, we expect declining house prices into 2009.

Houses are the collateral for mortgage loans. Declining house prices therefore create a "collateral deflation." As Ben Bernanke stated in his June 15, 2007 speech "The Financial Accelerator and the Credit Channel:" "…the availability of collateral facilitates credit extension. The ability of a financially healthy borrower to post collateral reduces the lender's risks and aligns the borrower's incentives with those of the lender." Logically, falling collateral values restrain credit extension. We expect the collateral deflation in housing to last longer than the decline in residential construction, limiting the growth rate of consumer debt and consumer spending.

The current subprime crisis is one of a long line of financial crises over the decades including the Penn Central commercial paper crisis of 1970, the oil price shock of 1974, the Hunt silver crisis of 1980, the Continental Illinois bankruptcy of 1984, the stock market crash of 1987, the savings and loan and junk bond crisis of 1990, the Mexican financial crisis of 1995, the combined Asian crisis, Russian default and Long-Term Capital Management crisis of 1998, the technology bust and Worldcom/Enron bankruptcies of 2002. There are numerous precedents to various aspects of the current credit crunch. The illiquidity of complex mortgage securities was illustrated by the Askin Capital liquidation in 1994. House price deflation occurred in the oil patch states in the mid-1980s and mortgage write-offs were widespread in the savings and loan crisis. The vulnerability of core financial institutions to highly leveraged securities was part of the 1998 crisis. The assumptions underlying quantitative models broke down when market liquidity proved vulnerable to portfolio insurance selling in 1987 just as they broke down for complex mortgage securities in 2007. Losses on highly-tranched Collateralized Bond Obligations (CBOs) constructed from junk bonds in the late 1980s were a precursor to losses on highly-tranched Collateralized Debt Obligations (CDOs) constructed in part from subprime loans in 2006 and 2007. The lesson of these prior crises is that a period of economic weakness often follows credit crunch episodes but economic expansion tends to resume with a lag in response to easier monetary policy and often easier fiscal policy.

In the current cycle, funding stresses reflect the reluctance of financial institutions to lend to other financial institutions on an unsecured basis due to uncertainties about their financial strength. These funding stresses in the U.S., Canada, Europe and the U.K. emerged after the August 9, 2007 announcement that a European bank had major subprime problems and have persisted in recent months. Many borrowers had their loans priced against LIBOR, an interest rate for unsecured borrowing which remained high even as the

Fed eased. The Fed's discount window was ineffective in easing liquidity pressure as the potential stigma made banks reluctant to use it. Borrowing against mortgage collateral from the Federal Home Loan Banks was a partial substitute for the discount window for a few large institutions active in the mortgage markets. Finally, on December 12, 2007, five major central banks (Federal Reserve, European Central Bank, Bank of England, Swiss National Bank, Bank of Canada) adopted new policies to better provide liquidity. This resulted in extraordinary year-end funding totaling the equivalent of one-half trillion dollars from the European Central Bank as well as the Fed's new Term Auction Facility program. This TAF program is a well-designed innovation, which should contribute to a gradual easing of funding stresses. The private sector continues to discriminate against potentially weak financial institutions in providing funding. However, as long as banks meet the precise provisions of the Fed's TAF program, it does not discriminate against weaker credits and allows a broad range of eligible collateral. LIBOR spreads and other funding-risk spreads have eased off their worst levels since the December 12 announcement. We expect that greater confidence in the supply of liquidity from central banks should contribute to a gradual but sustained easing of the funding stresses.

A separate set of problems is the loss of equity capital for some core commercial banks and core investment banks. As a result of losses on investments in complex, highly leveraged mortgage securities and LBO debt, some key major financial institutions have reported write-offs that have impaired their shareholders' equity. There have been concerns about additional losses. If net worth is not quickly restored, losses to the net worth of core financial institutions have the potential to have a substantial impact on the economy by tightening credit availability.

How big is the problem of these losses? Widespread forecasts of losses totaling several hundred billion dollars on complex mortgage-related securities have triggered great concern. For perspective, the total value of the world's stock markets is around $50 trillion, so any week in which the world stock markets drop 2% delivers losses to investors of about $1 trillion. However, these are widely spread among investors, many of whom are unleveraged and diversified and do not experience any significant financial pressures from these market value losses. Why would smaller losses on complex mortgage-related securities create such worries? The reason is their potential to lower the net worth of key financial intermediaries. Core financial institutions are often leveraged 10 to 1 or more and their capacity to continue to supply credit can be disrupted if their net worth is substantially reduced. Assets such as leveraged buyout loans and structured investment vehicles have been absorbed onto bank balance sheets, using up some of the loan capacity of major banks. We believe that this re-intermediation of risky assets back onto bank balance sheets is stabilizing for the overall financial system. It brings the ownership of these assets into institutions known to have potential access to the central bank for emergency liquidity, thus lowering fears of a fire sale of assets. However, it allocates the equity capital of the banks to back up existing loans leaving less available to back up new loans. The result is to tighten the terms and availability of credit to new borrowers. Because risk spreads have widened, not all of the Fed easing has yet passed through to lower the interest rates for final borrowers. Non-housing credit is still available but the terms are somewhat less favorable than they had previously been. As a result, credit expansion is likely to be less supportive of economic growth.

Fortunately, key financial institutions have been able to raise additional equity capital quickly from sovereign wealth funds and other investors due to ample global liquidity. This has replaced equity capital lost on mortgage-based securities or LBO debt.

Given the credit crunch risks, why hasn't the Fed been more aggressive in lowering interest rates, more in keeping with expectations that market participants have priced into securities markets? Ben Bernanke laid out his basic framework in a speech on "Asset-Price 'Bubbles' and Monetary Policy" on October 15, 2002: "Use the right tool for the job…the Fed should use monetary policy to target the economy, not the asset markets…my prescription is for the Fed to use its regulatory, supervisory, and lender-of-last-resort powers to protect and defend the financial system." However, as the economic statistics have weakened in recent weeks, the justification for additional rounds of easing has become more clear-cut, as reflected in the Fed's decision to cut the Federal funds rate 75 basis points in an intermeeting cut.

Given all the stresses in the housing and financial sectors, isn't a very severe recession inevitable? Not necessarily. We believe that the recession might prove moderate within the range of past recessions especially now that the Fed has accelerated its easing. The housing recession should stretch across about 10 quarters, most of which have already occurred. Cyclical prospects for the domestic auto industry are indeed poor, but the industry is already operating at a depressed level, which should limit the magnitude of further weakness. Corporations have been restrained in their hiring in recent years, in sharp contrast to the pattern prior to the last recession. Interest rates never rose to sky high levels in this cycle and non-financial corporate liquidity is relatively ample for companies that did not engage in a leveraged buyout. The Fed and private economists believe that the trend growth rate of the U.S. economy has dropped to about 2.5% given changing demographics and limited domestic capital spending. This should limit the magnitude of the rise in the unemployment rate during the period of economic weakness. With real net exports likely to add 50 basis points or more to real GDP growth in 2008, only minimal domestic growth is necessary to generate a back-end-loaded growth rate in the 1% to 2% range over the four quarters of 2008.

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