

INFLATION: A REAL OR IMAGINED THREAT?

Rising inflation usually is toxic for financial markets, so is a topic of great importance to investors. It comes up for discussion at virtually all of our client meetings, with many clearly worried that inflation could become a big problem in the next couple of years. At BCA, we have downplayed the near-term inflation risks, but there are some valid concerns about the longer-term outlook. In this *Special Report*, we take a detailed look at the inflation debate.

WHAT CAUSES INFLATION?

You might think that the economics profession had figured out the answer to the above question by now. Sadly, it has not. Like many other issues in economics, there are a number of competing theories and frustratingly little agreement. Currently, this is highlighted by the marked divergence in “expert” opinions about the outlook. For some, the combination of extremely easy monetary policies, huge government deficits and rising commodity prices are classic signals that a serious inflation problem is inevitable. The alternative view is that lots of slack in labor and goods markets will keep a tight lid on price pressures in the developed economies for the foreseeable future. Who should you believe?

You might also think and hope that at least central banks have a good understanding of the inflation process. But, in a 2007 speech then Federal Reserve Vice Chairman Don Kohn said that: “we should always keep in mind how little we know about the economy...

we face a number of sources of uncertainty about the nature of the inflation process...we do not yet have a consensus structural model of inflation dynamics that satisfactorily explains all the important aspects of the empirical data...it is clear to me that our understanding of the inflation process still has far to go”. Translation: we don’t really know what causes inflation and our models don’t work very well.

There are three different, albeit interrelated, views of what drives inflation:

- **Monetarism:** Inflation is caused by too much money chasing too few goods.
- **Cost-push:** Rising input prices (e.g. commodities and wages) force companies to boost prices.
- **Demand pull:** A strongly-growing economy gives companies more pricing power and employees more wage bargaining power.

Clearly, there are linkages between these approaches. If the economy is growing strongly, then there is a good chance that money growth will be rapid and commodity prices and wages will be under upward pressure. And if all of these forces are moving strongly in the same direction, then the inflation implications are obvious. It gets more complex when there are divergences. And that is the case right now with cost-push pressures from commodities, but ongoing weak demand-pull conditions in the developed world.

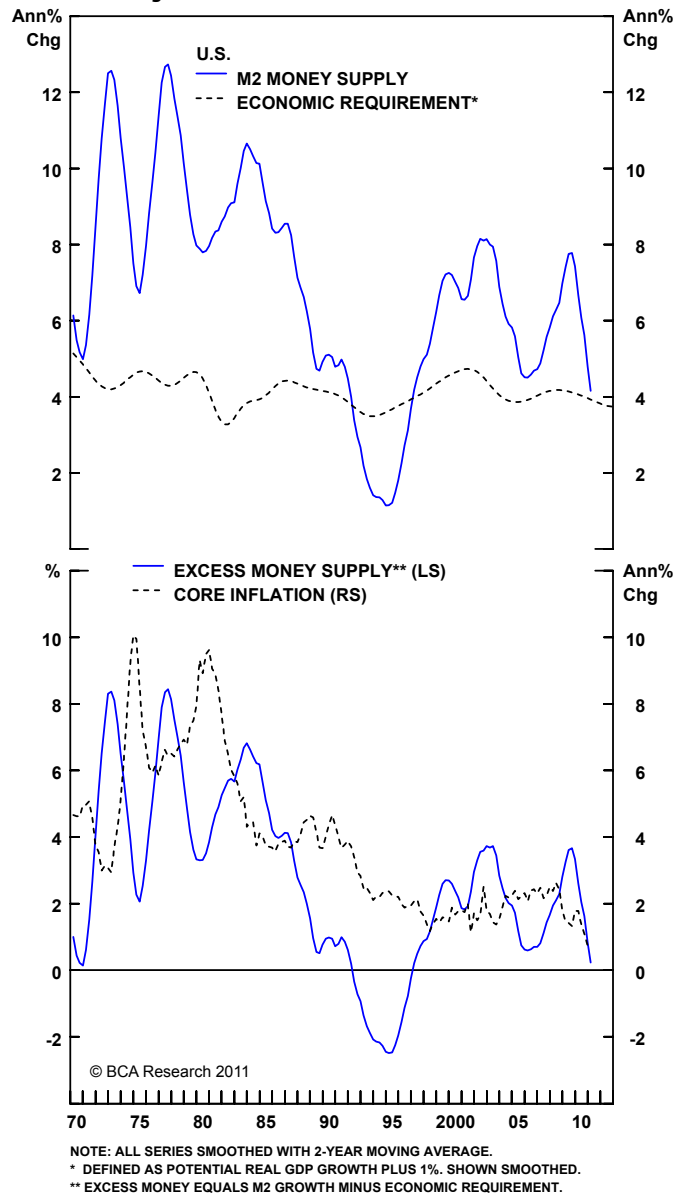
THE MONETARIST APPROACH TO INFLATION

The late Milton Friedman famously stated that “inflation is always and everywhere a monetary phenomenon”. It is hard to argue against the basic tenet of monetarism: if too much money is created it will debase the value of the currency by pushing up the prices of goods and services. And this highlights a notable distinction from the other inflation theories. The monetarist perspective is not focused exclusively on the prices of goods and services (e.g. the consumer price index), but also considers rising asset prices as a form of inflation. The point is that excess money will flow somewhere and could be reflected in rising prices for equities, wheat or movie tickets. From this perspective, inflation can be defined as the creation of excess money and credit, and a rising consumer price index is merely a symptom of the real problem.

How much money is “too much”? A growing economy requires expanding liquidity, so one definition of excess money would be increases above the economy’s underlying real growth rate. A refinement would be to add 1% to real growth on the grounds that a 1% inflation rate is tolerable as a small cushion against deflation. And the data should be smoothed because money growth must remain above economic growth for at least a couple of years in order to generate serious inflationary pressures.

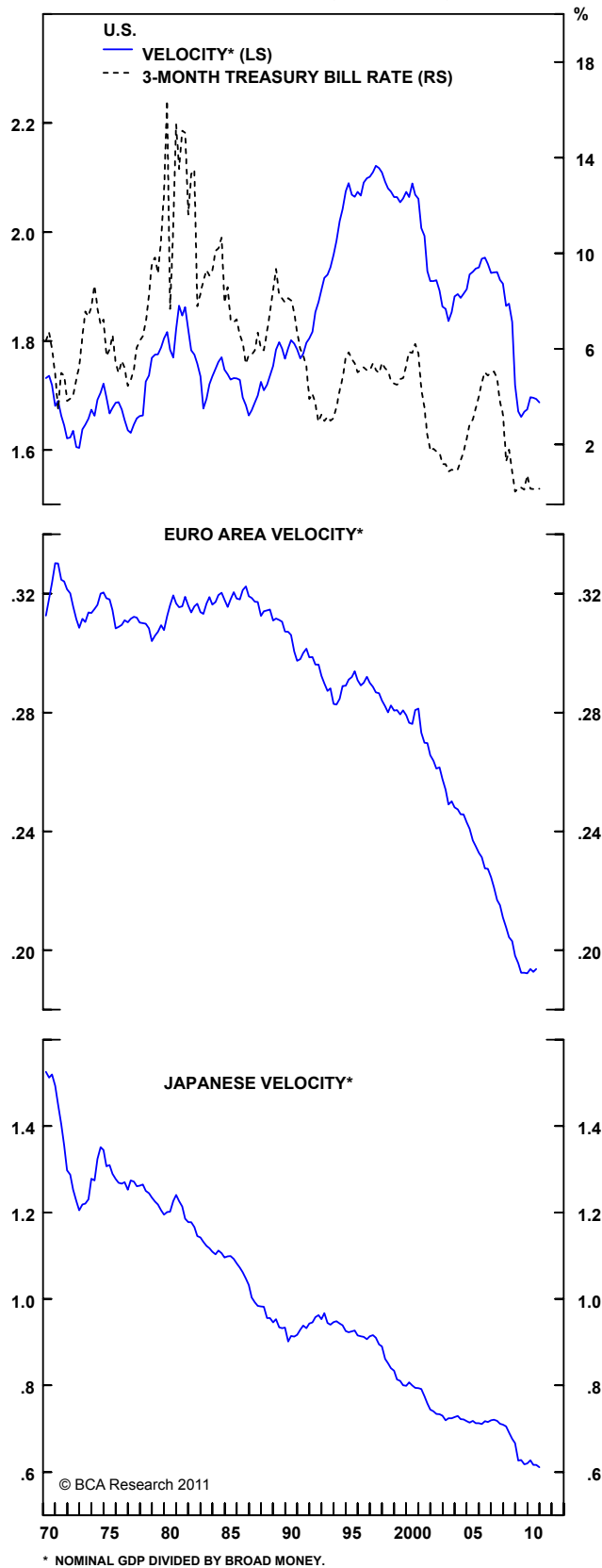
In **Chart 1**, we show the relationship between the smoothed growth rates of broad money and real potential GDP (plus 1%) in the U.S. Excess money is defined as periods when money growth exceeds that of potential GDP, and the second part of the chart overlays this with inflation. It can be seen that rising excess money growth led the spikes in inflation in the 1970s/early 1980s and the subsequent drop in inflation was matched by a contraction in money growth. Central banks conquered inflation in the 1980s by adopting a monetarist approach.

CHART 1
Money And Inflation: A Weakened Link



The problem is that the linkage between money growth and the economy/inflation weakened dramatically in the 1990s. The chart shows that excess money growth plunged, yet there was no corresponding collapse in inflation. And inflation did not rise much when excess money growth recovered (although we did have asset price bubbles). Put another way, the velocity of money (nominal GDP divided by M2) rose sharply in the 1990s then subsequently plunged (**Chart 2**). Previously, velocity had

CHART 2
A Breakdown In Money Velocity



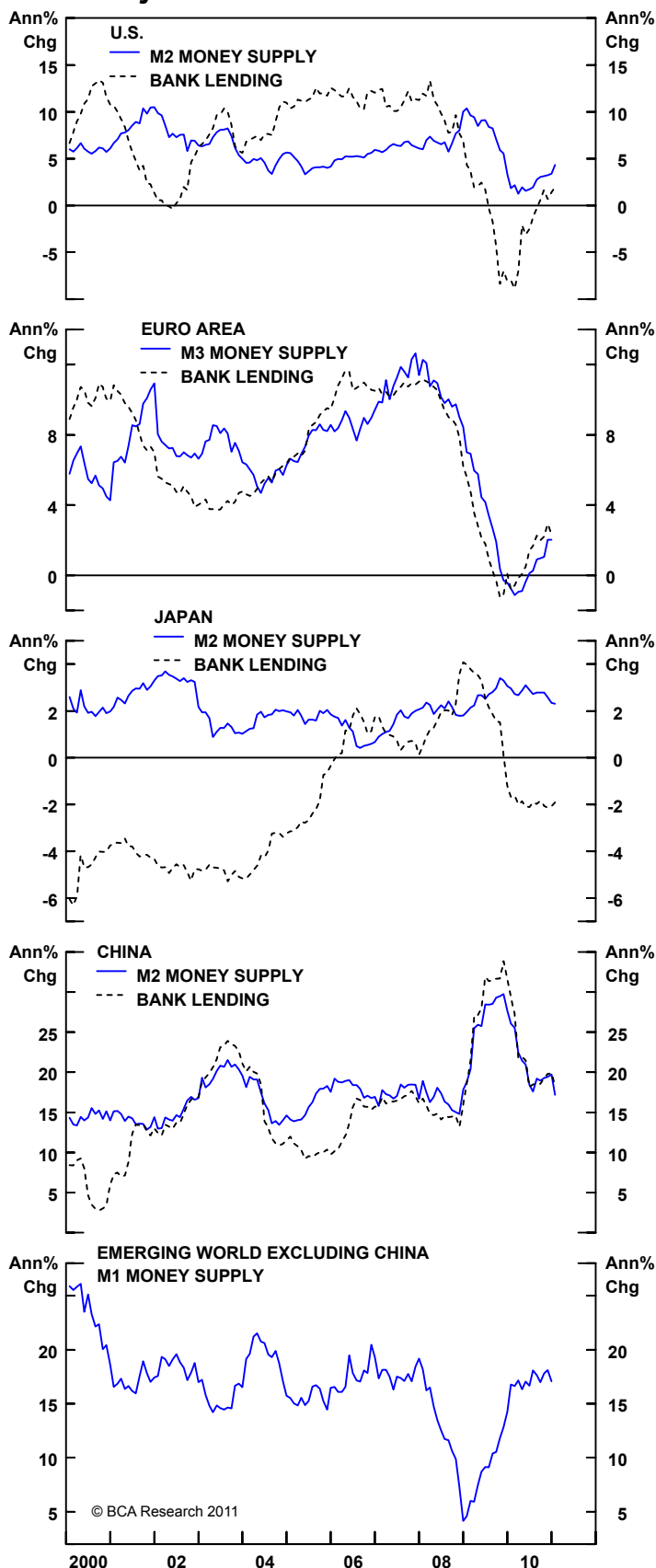
fluctuated within a relatively predictable band, with swings largely related to moves in interest rates. The break in the stability of velocity led the Fed to cease paying attention to the monetary aggregates in setting policy, and that still remains the case. There are no agreed explanations for the breakdown in the link between money and the economy, though financial deregulation and the growth of the shadow banking system played a role.

The trend in velocity has been more stable in Japan, albeit with a steady downtrend. However, in the euro area countries, there also was a marked change in trend in the 1990s. Many central banks would therefore argue that focusing on monetary trends in the past couple of decades would have provided misleading signals, and it was right not to react to strong money growth when velocity was unpredictable. However, if policymakers also had paid more attention to credit trends and asset prices, then it would have supported the case that policy was too easy.

What of the current situation? In the major developed economies, it is hard to argue that too much money is flowing through the system. The Fed and many other central banks are keeping interest rates very low and have dramatically expanded their balance sheets. But, credit intermediation remains impaired and there has been limited pass-through from the surge in bank reserves to increased broad money growth. Money and credit trends remain very subdued in the G7 (**Chart 3**). Put another way, money multipliers (the ratio of broad to narrow money) have collapsed.

The situation is very different in the emerging world. In many cases, money growth has been running at a pace consistent with rising inflationary pressures. For example, in the past five years, M2 growth in China has averaged 20% a year, more than double the economy's sustainable real growth rate. The annual growth of M1 in 21 other major emerging countries averaged almost 15% over the latest five-year period, also far above potential growth rates.

CHART 3
Money Trends: A Two-Tier World



In sum, a strict monetarist approach would argue that there are few grounds for worrying about inflation in the major developed economies at the moment. If the large pools of money currently sitting in bank reserves start to flow into the economy *via* sharply increased lending, then it will be a very different story. At that point, we assume policy would be tightened, but that is an issue for the future. Meanwhile, money growth clearly is inflationary in the emerging world, arguing for a tighter policy stance.

There is one additional point to make regarding the monetarist approach. While rising asset prices are a form of inflation, there are important differences between this and rising consumer prices. Investors are generally happy to see asset prices going up, while consumers do not like to pay more for goods and services. And rising asset prices are not a problem if they are supported by underlying fundamentals such as an improvement in the long-run corporate earnings outlook. The problem arises when assets become overvalued, fueled by excessive money creation. That takes us into the complex issue of whether central banks should pay more attention to asset prices in setting monetary policy. That topic is outside the scope of the current article, though it should be noted that policymakers now acknowledge that credit-fueled asset bubbles should not be ignored.

THE COST-PUSH APPROACH

The price indexes for metals, foodstuffs and Brent crude are up by 55%, 42% and 40% respectively since mid-2010. It's not surprising that such increases are causing inflation angst. However, the linkages between rising commodity prices and consumer prices are not very strong in the developed countries.

Taking the U.S. as an example, a regression over the past 25 years suggests that a 10% rise in food

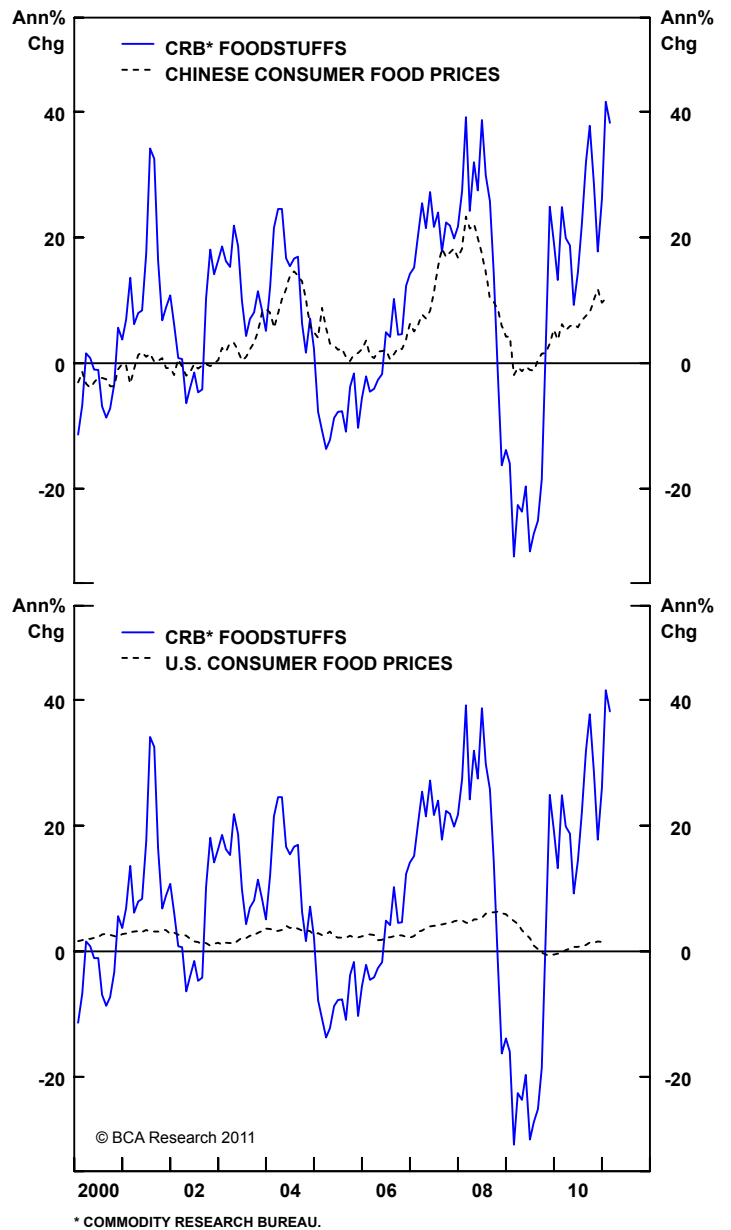
commodity prices translated into a 4.3% increase in the food manufacturing sector's intermediate input costs. In turn, that translated into a 1.8% increase in the prices of finished consumer foods which then led to a 0.7% increase in the food component of the consumer price index. Given food's weighting of 13.7% in the index, the net result is 0.1% extra on headline consumer inflation. The strength of the linkages weakened as food moved up through the processing chain as wage costs accounted for an increasing share of the value added.

The link between raw food prices and inflation clearly is much closer in the emerging world, because of food's greater weight in consumer spending. This is highlighted in **Chart 4**, showing the annual changes in raw and consumer food prices in China and the U.S. In China, food accounts for 33% of the CPI and because labor costs are low, there is greater pass-through from raw materials into finished good prices. Moreover, there is less dependence on processed food in the emerging countries, which means that shifts in raw food prices have a greater impact on inflation compared to developed countries.

The same point about limited pass-through in the developed countries also is broadly true for industrial commodity prices. The impact of rising commodity prices is heavily diluted by the fact that labor costs account for a large share (typically around 70%) of manufacturing costs. And by the time the finished goods reach the store shelves they are further diluted by transport costs, retail margins etc. Higher crude oil costs tend to get passed through more quickly into consumer prices because there is much less processing involved.

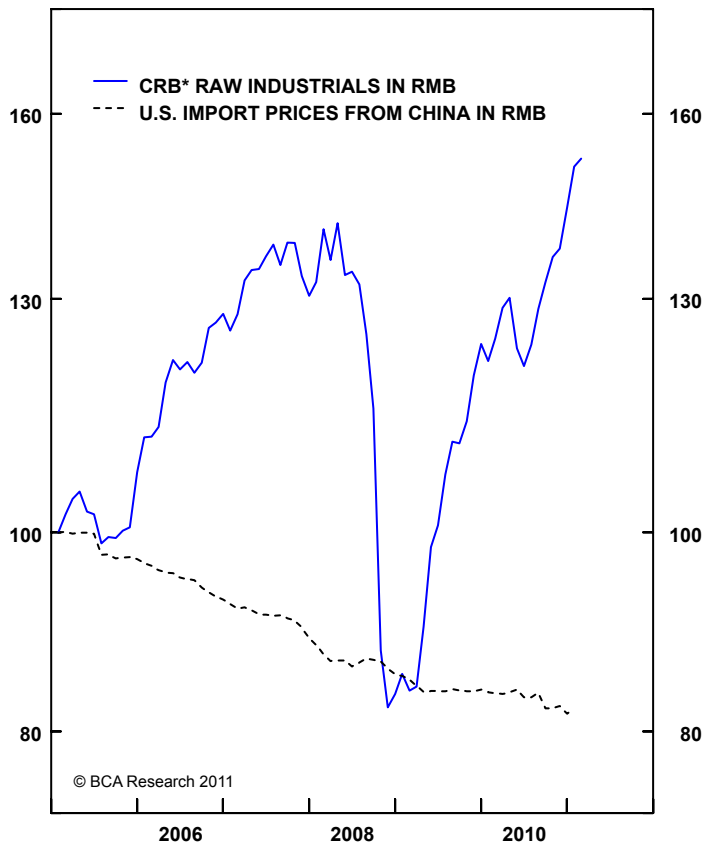
Of course, a large and growing share of goods consumed in the developed world is imported from the emerging countries where, as we have discussed, raw material prices have a more pronounced impact on finished goods prices. So, if rising commodity prices are felt keenly in China, it raises the prospect

CHART 4
Food Prices: It Matters Where You Live



of higher import prices for the developed world. Again, the evidence suggests that the impact has been limited thus far. The price index for Chinese goods imported into the U.S. is above year-ago levels in dollar terms, but is still deflating in terms of the renminbi (**Chart 5**). That might change if wage growth accelerates in China. Then the issue will be the extent to which Chinese manufacturers and U.S. importers (e.g. Walmart) choose to take a hit on margins rather than raise prices.

CHART 5
No Chinese Pass-Through From Commodities, So Far

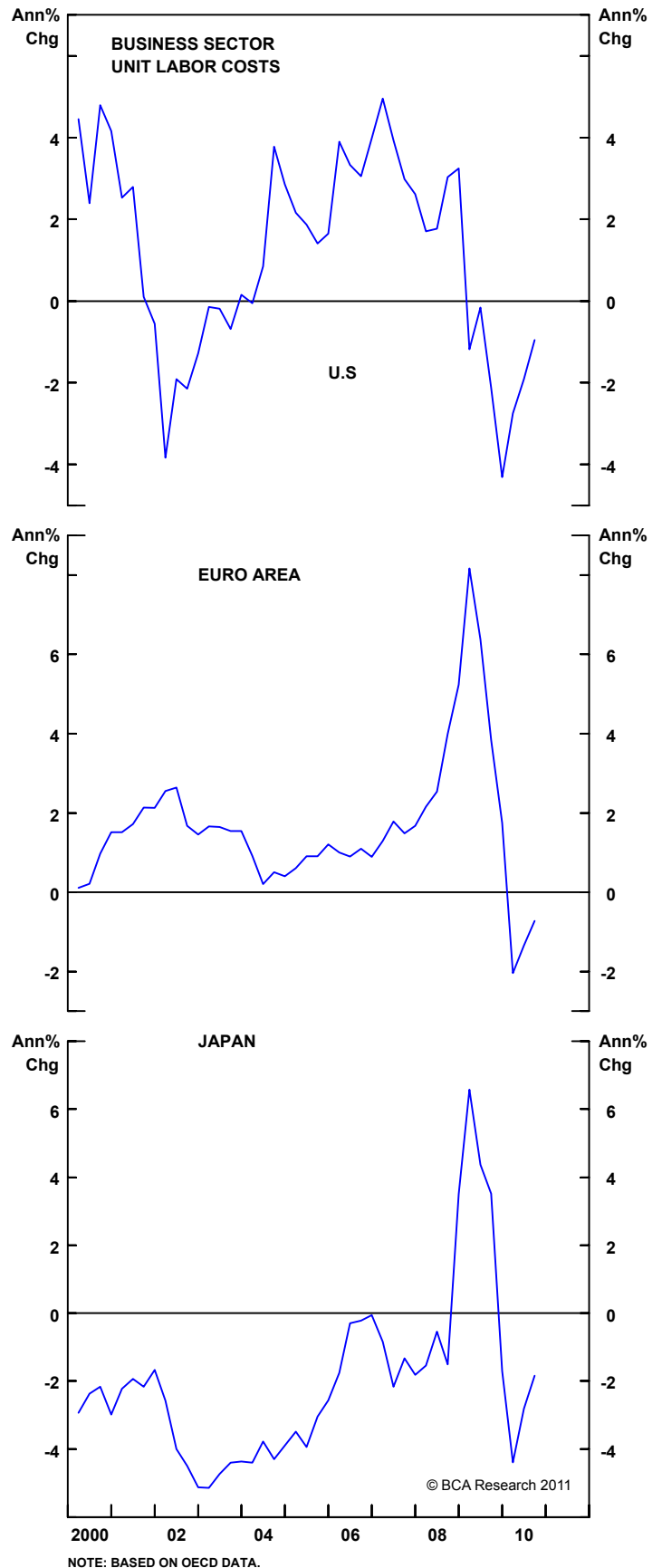


* COMMODITY RESEARCH BUREAU.
NOTE: BOTH SERIES REBASED TO JAN. 2005 = 100.

While commodity and energy prices cannot be ignored, the more important issue is what happens to unit labor costs. Thus far, these have been tame in most major economies (**Chart 6**). Companies have kept a lid on wage growth and have benefited from healthy productivity gains. There are no signs that companies in the developed world are about to start granting more generous wage increases, but the productivity outlook is more uncertain.

The bullish view of productivity is that companies will continue to find ways to leverage off new technologies for the foreseeable future. The alternative view is that productivity received a one-off boost from aggressive labor-shedding and hiring will soon rise sharply, undermining productivity growth. We lean toward to the positive scenario which seems to be supported by anecdotal evidence from companies. But, only time will tell which perspective is correct.

CHART 6
Unit Labor Costs Still Tame



NOTE: BASED ON OECD DATA.

CHART 7
Unit Labor Costs Do Not Lead Inflation

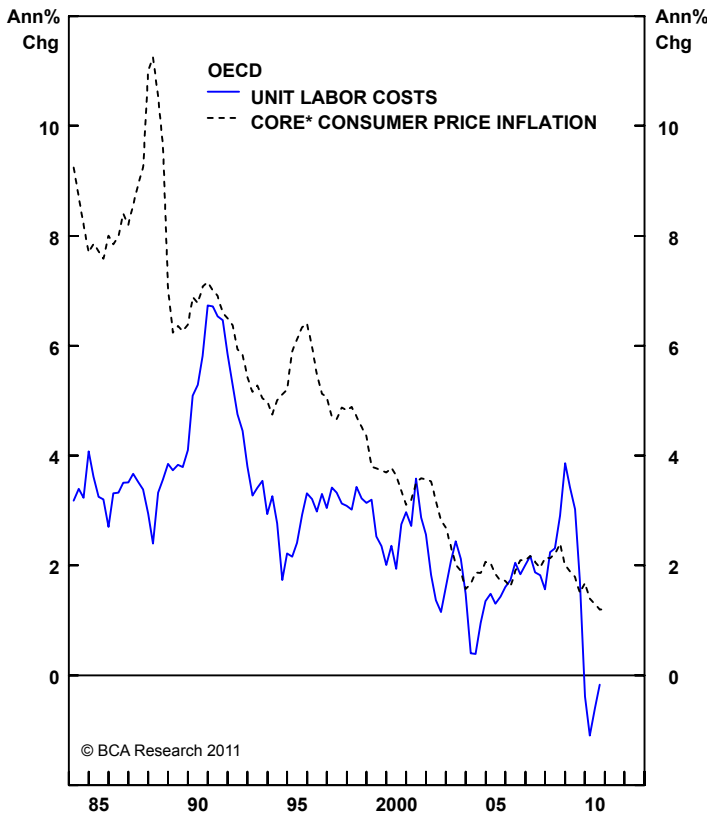
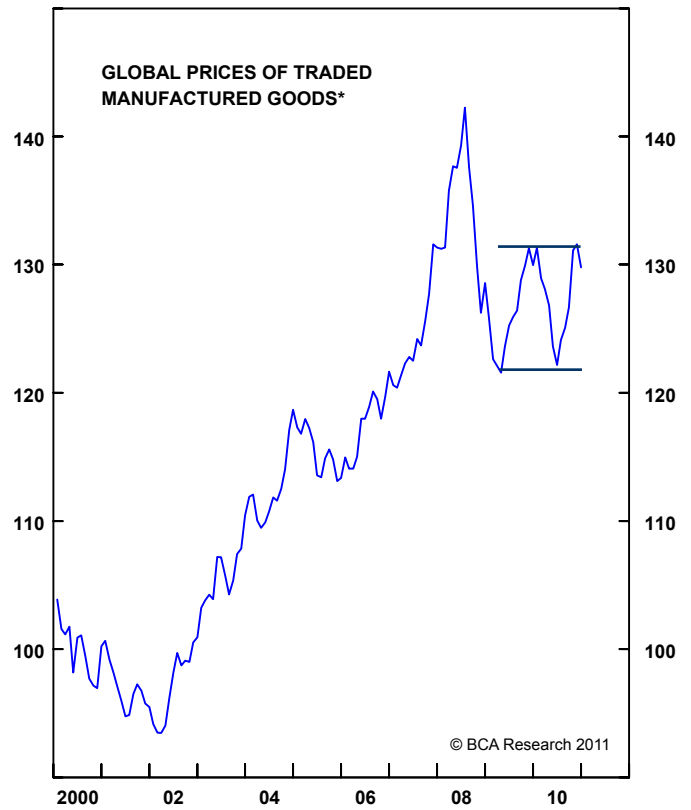


CHART 8
Traded Goods Prices Are Stable...For Now



It seems wrong to worry about inflation if unit labor costs are under control, but there is a problem. Historically, shifts in unit labor costs have been coincident-to-lagging rather than leading indicators of inflation in the OECD region (**Chart 7**). That supports the conclusions of a Fed research report that the causality runs from prices to wages, rather than the other way around. Nevertheless, ongoing muted growth in unit labor costs in the developed countries should give support to tame inflation.

Wages and unit labor costs clearly are a bigger issue in the emerging world. As noted earlier, food accounts for a relatively large share of consumer spending in most of these countries. Thus, if wages do not rise, there can be real hardship and suffering, not to mention political unrest. Thus, some pass-through from commodities into wages is inevitable. And while productivity growth is decent in much of the emerging world, some increase in unit labor

costs seems likely. Unfortunately, we do not have very good data on this, but, we can look at what is happening to trade prices as a proxy for cost pressures.

The benign growth in the price index of U.S. import prices from China or the recent flat trend in globally traded manufactured goods in general does not suggest a major cost problem (**Chart 8**). Of course, companies may be taking a hit to profit margins, but this is hard to discern from generally upbeat earnings reports.

There is a good chance that oil and commodity prices will trend higher in the months ahead, given turbulence in the Middle East, and this could further fuel inflation concerns. However, whether these rising costs can easily be passed through into final selling prices depends heavily on the strength of demand. This is where the cost-push view of inflation interacts with the demand-pull approach.

CHART 9
Lots Of Spare Capacity

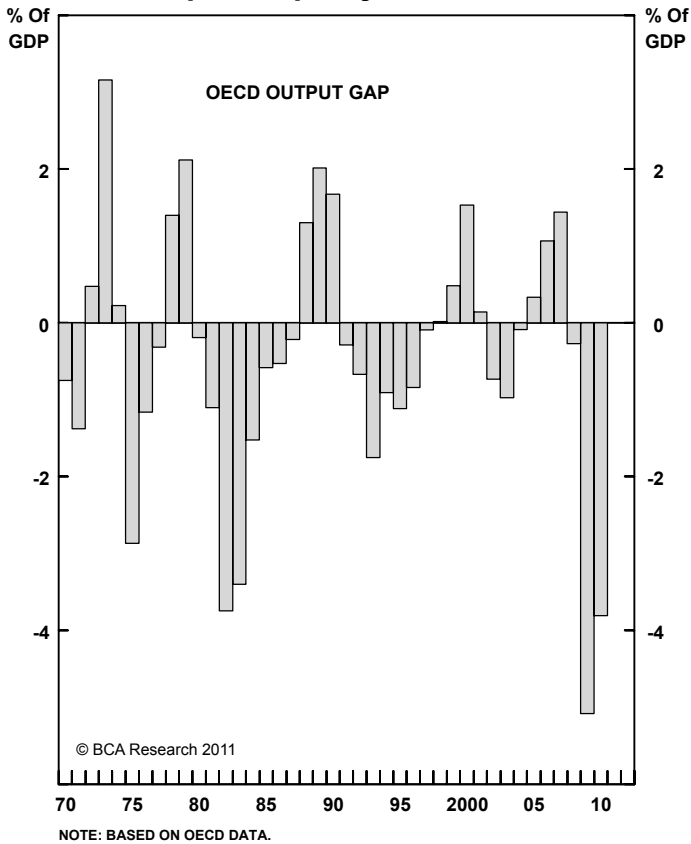
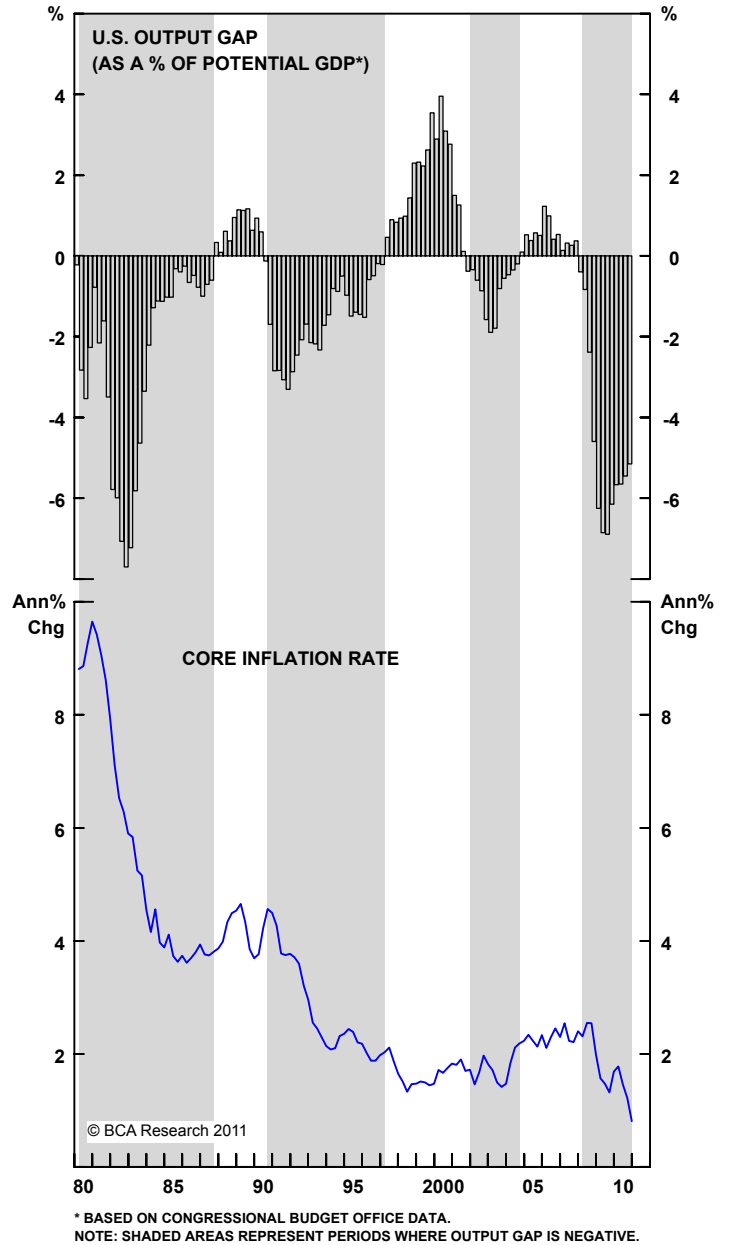


CHART 10
The Output Gap Does Not Always Explain Inflation



THE DEMAND-PULL APPROACH

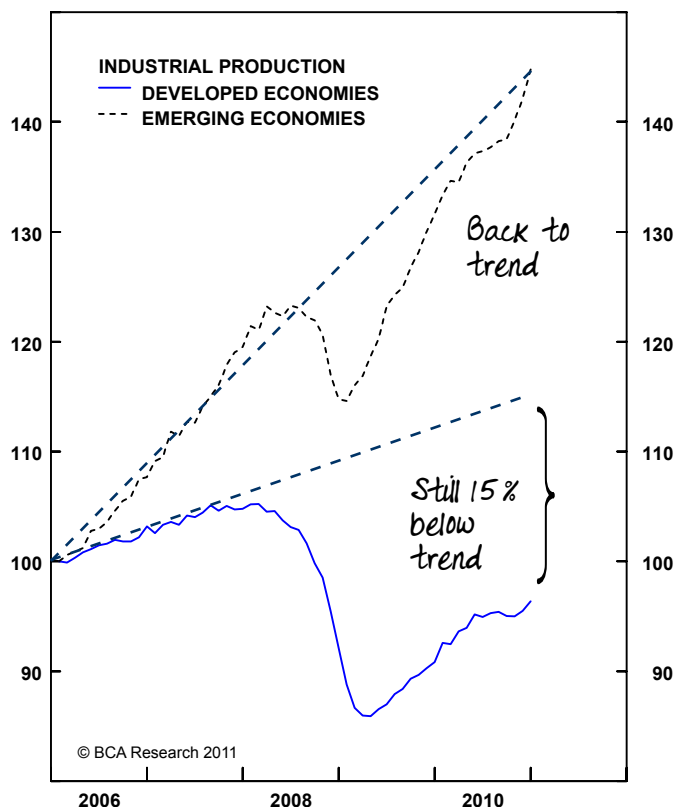
This approach also makes intuitive sense. If there is not much slack in labor and goods markets then it should be easier for employees to secure higher wages and for companies to pass this cost onto customers. Thus, if there is a large negative output gap (i.e. real GDP is far below its potential level) then inflation should be subdued. And if the gap is extremely large, then maybe we should worry about deflation.

According to OECD data, the negative output gap in the developed economies reached 4.7% in 2009, representing by far the greatest slack in the post-WWII period (Chart 9). There are all kinds of issues related to the measurement of potential GDP, so the numbers must be treated with caution. Nonetheless, the plunge in industrial production and spike in unemployment are consistent with a large amount of

slack. Although the recession ended in mid-2009, spare capacity remains large by historical standards.

Many central bankers focus on the output gap as a key indicator of inflationary pressures. For the developed countries, this is encouraging the Fed and other central banks to maintain a highly accommodative stance, although there is some dissension within the ranks. Some policymakers believe that the output

CHART 11
No Slack In The Emerging Economies



NOTE: BOTH SERIES REBASED TO JAN 2006 = 100.
 SOURCE: NETHERLANDS BUREAU FOR ECONOMIC ANALYSIS.

gap approach is flawed because of measurement issues and because it ignores the impact of expectations and monetary growth. The failure of central banks to control inflation in the 1970s can partly be attributed to a misguided focus on the real economy and the output gap, while ignoring trends in monetary growth and a deeply embedded inflationary psychology on the part of employees, consumers and businesses.

Historically, there has been some correlation between the output gap and shifts in inflation, but it is far from perfect. For example, in the U.S., inflation remained steady in the late 1990s, even though the economy was operating above capacity (Chart 10). And, inflation did not fall by as much as might have been expected in the past couple of years given the large output gap.

Once again, the story is more straightforward for the emerging countries. Industrial production has soared far above pre-crisis highs and is back to its long-run trend, implying there will be growing demand pressure on resources (Chart 11). From this perspective inflation is a threat to those economies.

PULLING IT ALL TOGETHER

Despite investor angst, the above analysis paints a relatively benign inflation picture for the developed countries. The policy mix of large fiscal deficits and highly stimulative monetary policies certainly appears inflationary. However, there currently is no excess monetary growth, and the pass-through from higher commodity prices is weak given ongoing slack in the economy. Rising energy and commodity prices have put upward pressure on headline inflation, but if consumers cannot get wage increases to compensate for these higher prices, then it simply forces them to curtail spending on other goods and services. In that sense, one could even regard higher energy and food prices as a potentially deflationary rather than inflationary shock. Even if one accepts that wages lag prices, there still is no sign of a wage-price spiral taking hold.

The story will change if monetary growth accelerates and economic activity continues to gain strength. Then, we would expect to see central banks move promptly to return policy to a more normal stance. If they are slow to do this, then it would warrant a more bearish view on inflation. Thus, we will continue to pay close attention to the monetary data and any signs of cost pass-through.

The emerging economies are in a very different position. All three approaches to inflation are telling the same story: There is excess money growth and the absence of slack implies that higher commodity and energy costs will push up wages and the overall prices of goods and services. Thus far, inflation is edging higher, not spiraling out of control. Nev-

ertheless, policymakers need to get ahead of the curve by raising rates and, where necessary, allowing exchange rates to appreciate.

The higher emerging country inflation goes, the more chance of it leaking into developed country inflation via higher traded goods prices and exchange rate moves. The world economy is interconnected and as the recovery in the developed world moves along, slack will be absorbed and pricing power will increase. Thus, one should not assume that the current benign inflation picture in the OECD will persist indefinitely.

ADDITIONAL THOUGHTS

Ultimately, what happens to inflation will be determined by the actions of central banks. The current stance of monetary policy in the developed economies would be highly inflationary in normal times, but we are still dealing with the aftermath of the deepest recession since the 1930s. The key will be the speed at which policy is tightened over the next couple of years as economic conditions return to something approaching normality.

The majority of the current generation of central bankers are still inflation hawks, at least in principle. In other words, they do not believe that there is a long-run trade-off between inflation and unemployment. Put another way, they believe that the economy performs better when inflation is low than when inflation is high. Thus, current dovish attitudes should not be interpreted as a permanent soft attitude to inflation. Nonetheless, policymakers could be late in removing current monetary stimulus, allowing underlying inflation to pick up for a while.

The Fed and some central banks still see asymmetric risks with regard to tightening too soon or too late. Tightening before it is certain that the economic recovery has reached a self-sustaining phase is deemed worse than being late and letting

inflation rise. In the case of the latter problem, the view is that policy should be able to get ahead of the curve relatively easily by being aggressive in tightening. Thus, any inflation slippage would be temporary and relatively mild.

The policy response would be more complicated if policymakers were faced with stagflation: i.e. the combination of high unemployment and high inflation, as occurred in the 1970s. However, we view a return to that environment as highly unlikely. In the 1970s, economies were much more rigid, unionization was high, there was less global competition, and inflation expectations were deeply engrained. In the current competitive world, the initial corporate reaction to increased costs is to look for ways to boost efficiency. Raising prices is a last rather than first resort.

What about the view that fiscally-challenged governments would welcome some inflation to devalue their debt burdens? Inflation certainly is an effective way to transfer wealth from creditors to debtors, and perhaps some governments would be tempted if they thought they could get away with it. However, it is not a simple option.

First of all, central banks would have to play ball by monetizing the debt. They already have shown their willingness to do so in order to prevent financial chaos. However, that was because the perceived major risk during the recent meltdown was deflation. It would be a different story if inflation was clearly rising. Secondly, bond vigilantes would have to stay out of the picture. If investors sniffed out that central banks were sowing the seeds for a major inflation problem, then presumably long-term yields would spike higher, damaging the economy and perhaps short-circuiting the inflation process. Finally, in the same vein, currency investors could spoil the plan if capital flight triggered a currency and economic crisis. In sum, in today's open and highly-liquid markets, it is not so easy for governments to fool the markets

and create inflation. It could be done more easily if capital controls were put in place, but that would be an Armageddon scenario.

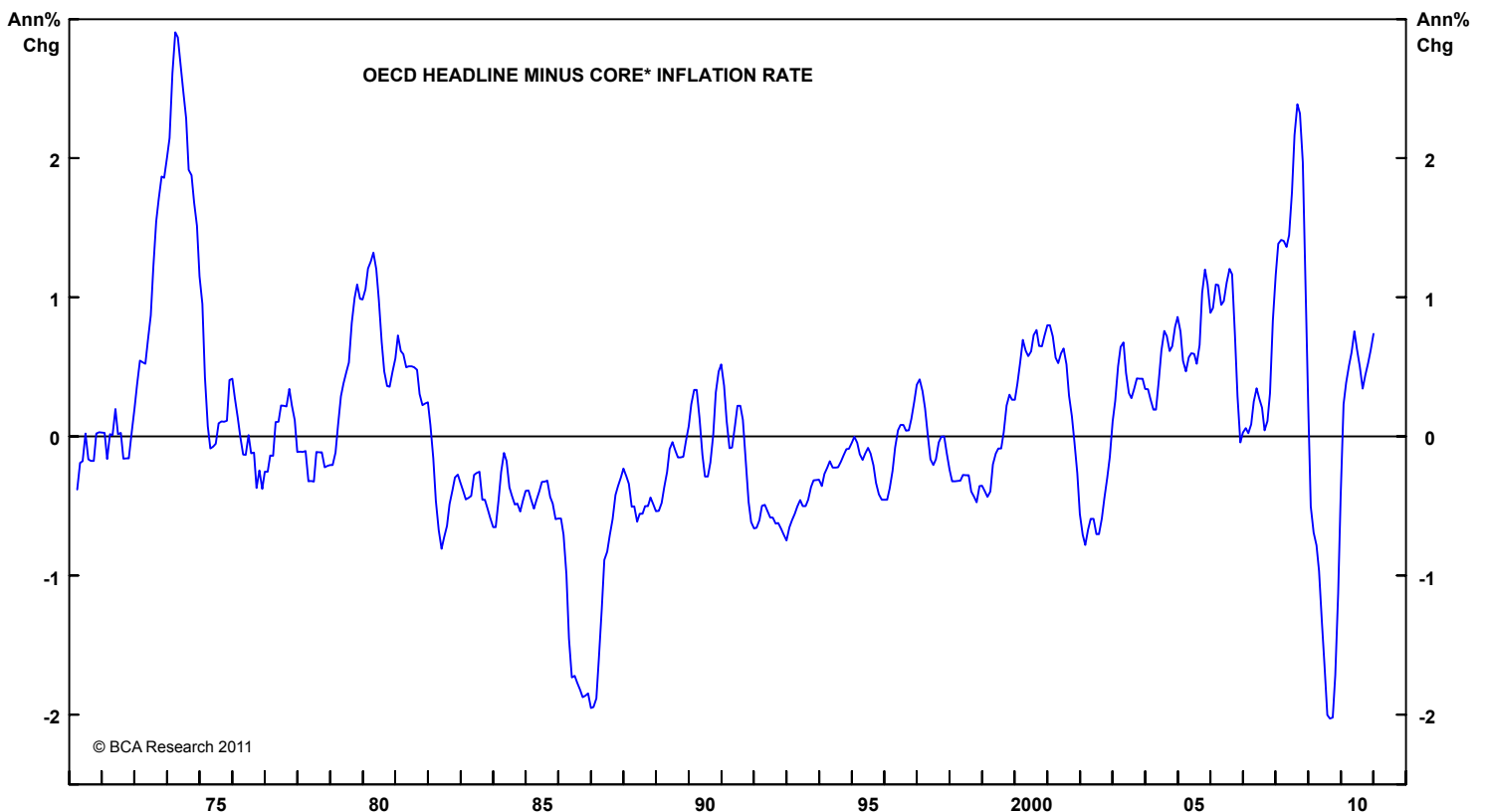
Then we have the argument that U.S. monetary policy is responsible for fuelling a bubble in commodity prices. There is no doubt that zero interest rates encourage speculation, and the Fed explicitly wanted more risk-taking when it feared a complete economic and financial meltdown. In this sense, U.S. monetary policy has played a role in the rise in commodities. However, the bigger culprit is excessively loose policies in China and other emerging countries, and the U.S. should not be held accountable for that.

Finally, it is worth having a word about the issue of core versus headline inflation. The headline rate is the most important with regard to measuring living

standards: rising prices for food and energy undermine real incomes. However, without any pass-through into wages and other goods and services, a sustained outbreak of inflation cannot occur. And, unless food and energy prices keep rising at an accelerating pace, then headline and core inflation eventually will converge. In the past 40 years, OECD core inflation averaged 4.71% compared to 4.77% for headline. The gap has been wider since 2000, but is still relatively modest (**Chart 12**). The core inflation rate remains important in terms of monitoring whether a wage-price spiral is taking hold.

Recent data suggest that core inflation may well have bottomed in the developed economies. In the overall OECD, the annual increase in the core consumer price index has been stuck at 1.2% for the past six months. In the U.S, the rate has moved back

CHART 12
The Gap Between OECD Core And Headline Inflation



* EXCLUDING FOOD & ENERGY, SMOOTHED. SOURCE: OECD.

to 1%, from a low of 0.6% in October, while the latest euro area rate of 1.1% also is above recent lows. Of course, central banks wanted inflation to move higher, and in most countries it remains below the desired level of around 2%. As long as core inflation stabilizes in the 1% to 2% area, then there will be no cause for concern. A move about that level does not seem likely any time soon.

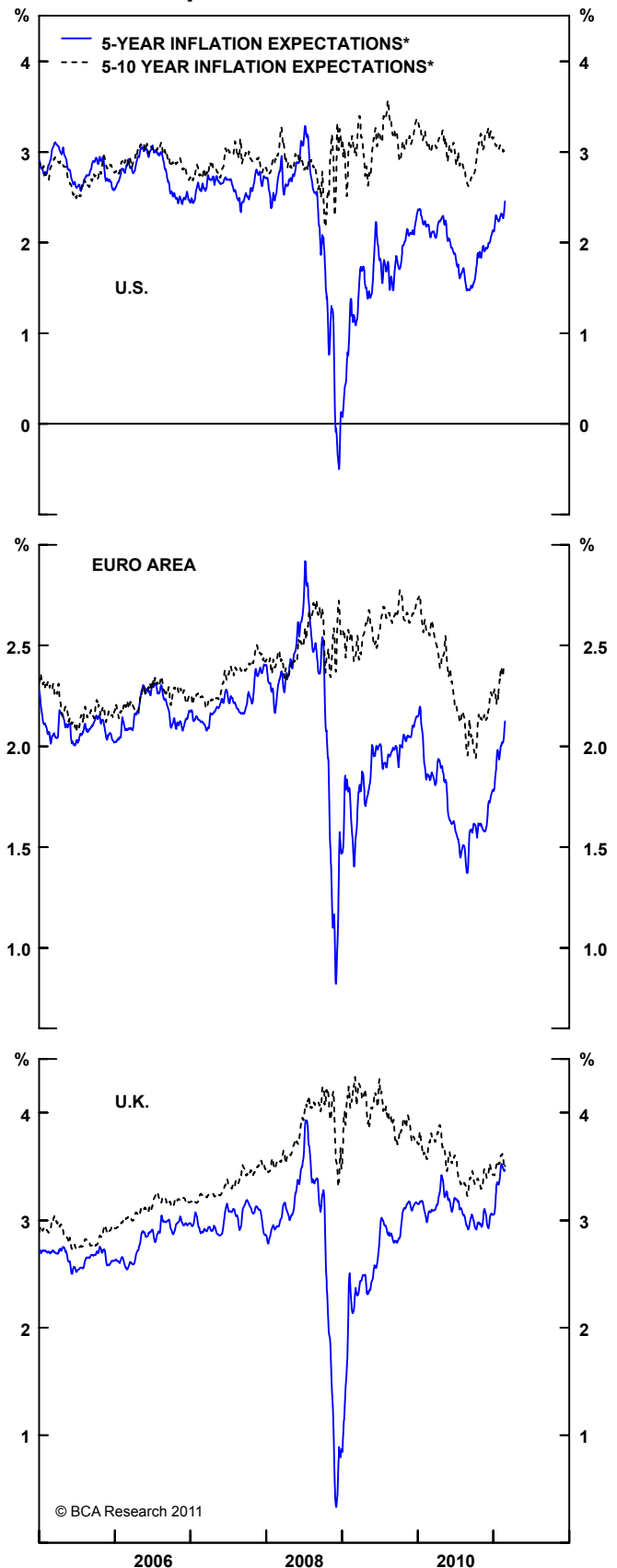
MARKET IMPLICATIONS

We started out this article by noting broad-based concerns about inflation among our clients. Yet, it is important to look at what people do rather than just listen to what they say. The inflation swaps market, shows that expectations of inflation for the next five years in the U.S. and euro area have risen from their low crisis-induced levels, but remain below pre-crisis rates (Chart 13). Meanwhile, for the further-out period between 5 and 10 years into the future, expectations have stayed broadly stable. There is more of a problem in the U.K. where expectations have broken above pre-crisis levels, both on a five-year and longer-term horizon.

Central banks are very focused on expectations as a measure of inflation risks. At the moment, these data largely support the case for policymakers to remain on hold. The pressures for action are greater in the U.K., but with fiscal austerity about to take a bite out of the economy, the Bank of England is not likely to make any near-term moves. The European Central Bank faces the challenge of balancing the pressures for some tightening in strong economies such as Germany and the need for accommodative policies to help the struggling periphery. On balance, the ECB is unlikely to tighten this year.

For the major developed economies, inflation does not pose any near-term threat to the cyclical bull market in risk assets. Asset prices are due for a setback, or at least a period of consolidation following their strong gains. Inflation fears may well receive some of

CHART 13
Inflation Expectations In The Market



* BASED ON CPI SWAP RATES.
NOTE: ALL SERIES SHOWN SMOOTHED.

the blame should such a setback occur, but the big-picture point is that inflation is not likely to require a monetary tightening at least during the remainder of this year. A normalization of monetary policy is likely to begin next year. However, that is not because inflation will become a major problem, but because economies will no longer need the support of such extremely low interest rates.

The bond market outlook in the major developed economies is not attractive and we continue to recommend below-average exposure. This is not because of inflation, but because real yields should rise from current low levels as the economic expansion matures. We expect bonds to underperform equities over the next couple of years.

As we have discussed, the story is different for the emerging economies where inflation is a clear and present danger. Monetary policy is behind the curve and more tightening is needed. Emerging equities have already been figuring that out, underperforming the developed markets by around 8% so far this year. This underperformance is likely to persist for a while longer – probably until investors sense that policy actions have reduced the inflation risks. But, the same line of reasoning makes a bullish case for emerging market currencies – they should rise as policy is tightened and foreign governments are more willing to accept currency appreciation as an anti-inflation tool.

Here is the bottom line. Deflation is no longer a serious threat and core inflation rates may well have bottomed in the developed world. Nevertheless, current angst seems overdone and does not warrant a bearish stance toward risk assets. In the emerging world, all three approaches to inflation are flashing red, and caution is warranted.

It seems appropriate to close with a word on gold. Gold is perceived by many as the ultimate inflation hedge and bullion prices have risen by 25% and 40% over the past one and two years respectively. While inflation anxiety may indeed have encouraged flows into gold, the relationship between trends in gold and inflation is very tenuous. In the 1970s and 1980s, gold did indeed have a positive correlation with inflation, but this broke down in the following two decades. A recent Bank of Canada research paper did find that gold has some predictive powers for inflation in some cases, but only in conjunction with other indicators such as the output gap and monetary growth. In sum, taking account of gold would not change our conclusions.

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