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The U.S. Will Experience a Severe Recession; thus a Large Fiscal Policy Stimulus is Necessary to Dampen the Severity of this Economic Contraction

The U.S. is currently in a severe recession that will be deeper, longer and more protracted than previous U.S. recessions. The last two economic recessions – in 1990-91 and 2001 – lasted each 8 months and the cumulative fall in GDP from peak through the through was only 1.3% in the 1990-91 contraction and 0.4% in the 2001 contraction. In a typical U.S. recession in the post-WWII period GDP falls by an average of 2% and the recession lasts 10 months. The current economic contraction – that my analysis dates as having started in the first quarter of 2008 will last through the fourth quarter of 2009 with a cumulative fall in GDP of the order of about 4% % that is even larger than the worst post-WWII recession (the one in 1957-68 when the GDP fall was 3.7%).

Since most components of private aggregate demand are sharply falling right now (private consumption, residential investment, non-residential investment in structures, capex spending by the corporate sector on software and machinery) a major additional fiscal stimulus is necessary to reduces the depth and length of the current economic contraction. And since direct tax incentives

have not been effective in boosting consumption and capex spending (as worried households and firms are retrenching their spending) the new round of fiscal stimulus will have to take the form of direct government spending on goods and services (preferably productive investment in infrastructures) and provision to income to those agents in the economy more likely to spend it (block grants to state and local governments, increased unemployment benefits to unemployed workers, etc.).

Given the size of the expected contraction in private aggregate demand (likely to be about \$450 billion in 2009 relative to 2008) a fiscal stimulus of the order of \$300 billion minimum (and possibly as large as \$400 billion) will be necessary to partially compensate for the sharp fall in private aggregate demand.

This fiscal stimulus should be voted on and spent as soon as possible as delay will make the economic contraction even more severe. A stimulus package legislated only February or March of next year when the new Congress comes back will be too late as the contraction of private aggregate demand will be extremely sharp in the next few months. Such policy action should be legislated right away – in a “lame duck” session right after the election – to ensure that the actual spending is undertaken rapidly in the next few months.

Financial Turmoil and Crisis

The rich world’s financial system is in significant and persistent turmoil. This is the worst financial crisis that the U.S. and other advanced economies have experienced since the Great Depression. Stock markets have been falling most days, money markets and credit markets have shut down as their interest-rate spreads skyrocket, and it is still too early to tell whether the raft of measures adopted by the US and Europe will stem the financial bleeding on a sustained basis.

A generalized run on the banking system has been a source of fear for the first time in seven decades, while the shadow banking system — broker-dealers, non-bank mortgage lenders, structured investment vehicles and conduits, hedge funds, money market funds and private equity firms — are at risk of a run on their short-term liabilities. On the real economic side, all the advanced economies — representing over 60% percent of global GDP — entered a recession even before the massive financial shocks that started in late summer. So we now have recession, a severe financial crisis and a severe banking crisis in the advanced economies.

Emerging markets were initially tied to this distress only when foreign investors began pulling out their money. Then panic spread to credit markets, money markets and currency markets, highlighting the vulnerabilities of many developing countries’ financial systems and corporate sectors, which had experienced credit booms and had borrowed short and in foreign currencies. Countries with large current-account deficits and/or large fiscal deficits and with large short-term foreign currency liabilities have been the most fragile. But even the better-performing ones — like Brazil, Russia, India and China — are now at risk of a hard landing. Many emerging markets are now at risk of a severe financial crisis.

The crisis was caused by the largest leveraged asset bubble and credit bubble in history. Leveraging and bubbles were not limited to the US housing market, but also characterized housing markets in other countries. Moreover, beyond the housing market, excessive borrowing by financial institutions and some segments of the corporate and public sectors occurred in many economies. As a result, a housing bubble, a mortgage bubble, an equity bubble, a bond bubble, a credit bubble, a commodity bubble, a private equity bubble and a hedge funds bubble are all now bursting simultaneously.

The hope that economic contraction in the US and other advanced economies would be short and shallow — a V-shaped six-month recession — has been replaced by certainty that this will be a long and protracted U-shaped recession, possibly lasting at least two years in the US and close to two years in most of the rest of the world. And, given the rising risk of a global systemic financial meltdown, the prospect of a decade-long L-shaped recession — like the one experienced by Japan after the collapse of its real estate and equity bubble — cannot be ruled out.

Indeed, the growing disconnect between increasingly aggressive policy actions and strains in the financial market is scary. When Bear Stearns' creditors were bailed out to the tune of US\$30 billion in March, the rally in equity, money and credit markets lasted eight weeks. When the US Treasury announced a bailout of mortgage giants Fannie Mae and Freddie Mac in July, the rally lasted just four weeks. When the US\$200 billion rescue of these firms was undertaken and their US\$6 trillion in liabilities taken over by the US government, the rally lasted one day.

Until the recent US and European measures were announced, there were no rallies at all. When AIG was bailed out to the tune of US\$85 billion, the market fell 5 percent. Then, when the US\$700 billion US rescue package was approved, markets fell another 7 percent in two days. As authorities in the US and abroad took ever more radical policy steps in the last few weeks, stock, credit and money markets fell further, day after day for most days. Even the rally following the G7 statement and radical policy actions taken to back stop the financial system lasted only one day and was followed by two weeks of sharply falling equity prices and rising CDS and credit spreads. Policy authorities seem to have lost their credibility in financial markets as - until recently - their actions were step by step, ad hoc and without a comprehensive crisis resolution plan.

Do the recent measures go far enough? When policy actions don't provide real relief to market participants, it is clear that you are one step away from a systemic stress on the financial and corporate sector. A vicious circle of de-leveraging, plummeting asset prices and margin calls is underway.

Recent Policy Actions and Further Necessary Policy Actions to Stem the Crisis

As we have seen in recent weeks, it will take a big change in economic policy and very radical, coordinated action among all advanced and emerging-market economies to avoid an even more severe economic and financial crisis. This includes:

- another rapid round of interest-rate cuts of at least 150 basis points on average globally;

- a temporary blanket guarantee of all deposits while insolvent financial institutions that must be shut down are distinguished from distressed but solvent institutions that must be partially nationalized and given injections of public capital;
- a rapid reduction of insolvent households' debt burden, preceded by a temporary freeze on all foreclosures;
- massive and unlimited provision of liquidity to solvent financial institutions;
- public provision of credit to the solvent parts of the corporate sector in order to avoid a short-term debt refinancing crisis for solvent but illiquid corporations and small businesses;
- a massive direct government fiscal stimulus that includes public works, infrastructure spending, unemployment benefits, tax rebates to lower-income households and provision of grants to cash-strapped local governments;
- an agreement between creditor countries running current-account surpluses and debtor countries running current-account deficits to maintain an orderly financing of deficits and a recycling of creditors' surpluses to avoid disorderly adjustment of such imbalances.

After the early October crash in stock markets and financial markets (and it was indeed a crash as during the week before the G7/IMF meetings equity prices fell as much as the two day crash of 1929) policy makers finally realized the risk of a systemic financial meltdown, they peered into the systemic collapse abyss a few steps in front of them and finally got religion and started announcing radical policy actions (the [G7 statement](#), the EU leaders agreement to bailout European banks, the British plan to rescue – and partially nationalize - its banks, the European countries plans along the same lines, and [the Treasury plan to ditch the initial TARP that was aimed only buying toxic assets in favor of plan to recapitalize – i.e. partially nationalize – US banks and broker dealers](#)). The main policy actions that will be undertaken are:

- Preventing systemically important banks and broker dealers from going bust (i.e. the U.S. made a mistake letting Lehman fail; so Morgan Stanley and other systemically important financial institutions will be rescued) (“Take decisive action and use all available tools to support systemically important financial institutions and prevent their failure” as in the [G7 statement](#))
- Recapitalization of banks and broker dealers via public injections of capital via preferred shares (i.e. partial nationalization of financial institutions as it is already occurring in the UK, Belgium, Netherlands, Germany, Iceland and, soon enough the U.S.) matched by private equity injections (“Ensure that our banks and other major financial intermediaries, as needed, can raise capital from public as well as private sources, in sufficient amounts to re-establish confidence and permit them to continue lending to households and businesses”)
- Temporary guarantee of bank liabilities: certainly all deposits, possibly interbank lines along the lines of the British approach, likely other new debts incurred by the banking system (“Ensure

that our respective national deposit insurance and guarantee programs are robust and consistent so that our retail depositors will continue to have confidence in the safety of their deposits”)

- Unlimited provision of liquidity to the banking system and to some parts of the shadow banking system to restore interbank lending and lending to the real economy (“Ensure that our banks and other major financial intermediaries, as needed, can raise capital from public as well as private sources, in sufficient amounts to re-establish confidence and permit them to continue lending to households and businesses”)

- Provision of credit to the corporate sector via purchases of commercial paper (certainly in the US, possibly in Europe)

- Purchase of toxic assets to restore liquidity in the mortgage backed securities market (U.S.) (“Take action, where appropriate, to restart the secondary markets for mortgages and other securitized assets. Accurate valuation and transparent disclosure of assets and consistent implementation of high quality accounting standards are necessary.”)

- Implicit triage between distressed that are solvent given liquidity support and capital injection and non-systemically important and insolvent banks that will need to be closed down/merged/resolved/etc.

- Use of the IMF and other international financial institutions to provide lending to many emerging market economies – and some advanced ones such as Iceland - that are now at risk of a severe financial crisis.

- Use of any other tools that is available and necessary to avoid a systemic meltdown (including implicitly more monetary policy easing as well as possibly fiscal policy stimulus “We will use macroeconomic policy tools as necessary and appropriate.”).

At this stage central banks that are usually supposed to be the "lenders of last resort" need to become the "lenders of first and only resort" as, under conditions of panic and total loss of confidence, no one in the private sector is lending to anyone else since counterparty risk is extreme. Only over time private lending will recover.

While most of the economic and financial damage is already done and the global economy will not be able to avoid a painful recession, financial and banking crisis (i.e. the V-shaped short and shallow 6-month recession is now out of the window and we will experience a severe and more protracted 18 to 24 months U-shaped recession) the rapid and consistent implementation of these and other action will prevent the US, European and global economies from experiencing a systemic financial meltdown and entering in a more severe L-shaped decade long stagnation like the one experienced by Japan after the bursting of its real estate and equity bubble.

Are we close to the bottom of this financial crisis? Not really as financial markets are and will remain volatile with significant downside risks to markets remain over the next few weeks and months as:

- details of the policy plans are still very fuzzy and ambiguous and with uncertain effects on various assets classes (common shares, preferred shares, unsecured debt of financial institutions, etc.);

- macroeconomic news will surprise on the downside as the economies sharply weaken and contract while fiscal policy stimulus is lagging. Indeed such macro news flow was worse than awful in the last couple of weeks: free fall in retail sales confirming a consumption recession that started in June; terrible news about housing (starts, permits, prices, homebuilders' sentiment); consumer confidence collapsing; awful leading indicators of supply from the regional Fed reports (Empire State and Philly); continued high initial claims; free fall in industrial production (only in part driven by temporary factors); fall in durable goods orders ex-transportation.

- earnings news for financial and non financial firms will sharply surprise on the downside;

- the damage done to confidence and to levered investment is already severe and the process of deleveraging of the shadow financial system will continue;

- major sources of future stress in the financial system remain; these systemic financial risks include: a major surge in corporate defaults rates and fall in recovery rates as the recession becomes severe thus leading to a further widening of credit spreads; the risk of a CDS market blowout as corporate defaults start to spike; the collapse of hundreds of hedge funds that, while being small individually, will have systemic effects as hundreds of small funds make the size of a few LTCMs in terms of their common deleveraging and selling assets in illiquid markets; the rising troubles of many insurance companies; a slow motion refinancing and insolvency crisis for many toxic LBOs once covenant-lite clauses and PIK toggles effects fizzle out; the risk that other systemically important financial institutions are insolvent and in need of expensive rescue programs while the \$250 bn of recap of banks is way insufficient to deal with their needs; the ongoing process of deleveraging in illiquid financial markets that will continue the vicious circle of falling asset prices, margin calls, further deleveraging and further sales in illiquid markets that continues the cascading fall in asset prices; further downside risks to housing and to home prices pushing over 20 million households into negative equity by 2009; the risk that some significant emerging market economies and some advanced ones too (Iceland) will experience a severe financial crisis.

The last factor is a crucially important one: there are now about a dozen of emerging market economies that are in serious financial trouble: they include Estonia, Latvia, Hungary, Bulgaria, Turkey, Pakistan, Korea, Indonesia, a few other ones in Central-South Europe and several Central American ones. There is now a significant and rising risk that several of them will experience a true financial crisis. Even a small tiny country of 300,000 souls like Iceland is now having systemic effects on global financial markets: since the country was like a huge hedge fund with banks having liabilities that were 12 times the GDP of the country the collapse of these banks may now lead to a disorderly sale of their assets in already illiquid markets. Now the risk of a financial crisis in a number of twenty countries in the region that goes from the Baltics to Turkey is rising as they all they have very large current account deficits and other macro and financial vulnerabilities.

Need for Fiscal Policy Stimulus to Dampen the Contraction in Private Demand

More aggressive and consistent and rapid implementation of the policy plans will increase the likelihood that risky asset prices will bottom out sooner rather than later and then start recovering. A key policy tool – that is currently missing in the G7 and EU plans is to use fiscal policy to boost aggregate demand. Indeed, given the current collapse of private aggregate demand (consumption is falling, residential investment is falling, non-residential investment in structures is falling, capex spending by the corporate sector was falling already before the latest financial and confidence shock and will now be plunging at an even faster rate) it is urgent to provide a boost to aggregate demand to ensure that an unavoidable two-year recession does not become a decade long stagnation. Since the private sector is not spending and since the first fiscal stimulus plan (tax rebates for households and tax incentives to firms) miserably failed as households and firms are saving rather than spending and investing it is necessary now to boost directly public consumption of goods and services via a massive spending program (a \$300 to \$400 bn fiscal stimulus): the federal government should have a plan to immediately spend in infrastructures and in new green technologies; also unemployment benefits should be sharply increased together with a targeted tax rebates only for lower income households at risk; and federal block grants should be given to state and local government to boost their infrastructure spending (roads, sewer systems, etc.). If the private sector does not spend and/or cannot spend old fashioned traditional Keynesian spending by the government is necessary. It is true that we are already having large and growing budget deficits; but \$300-400 bn of public works is more effective and productive than just spending \$700 bn to buy toxic assets and/or recapitalizing financial institutions. If such fiscal stimulus plan is not rapidly implemented any improvement in the financial conditions of financial institution that the rescue plans will provide will be undermined – in a matter of six months – with an even sharper drop of aggregate demand that will make an already severe recession even more severe. So a fiscal stimulus plan is essential to restore – on a sustained basis – the viability and solvency of many impaired financial institutions. If Main Street goes bust in the next six months rescuing in the short run Wall Street will still lead Wall Street to go bust again as the real economy implodes further.

Moreover, the US government will need to implement a clear plan to reduce the face value of mortgages for distressed home owners and avoid a tsunami of foreclosures (as in the Great Depression HOLC and in [my HOME proposal](#)). Households in the US have too much debt (subprime, near prime, prime mortgages, home equity loans, credit cards, auto loans and student loans) while their assets (values of their homes and stocks) are plunging leading to a sharp fall in their net worth. And households are getting buried under this mountain of mounting debt and rising debt servicing burdens. Thus, a fraction of the household sector – as well as a fraction of the financial sector and a fraction of the corporate sector and of the local government sector – is insolvent and needs debt relief. When a country (say Russia, Ecuador or Argentina) has too much debt and is insolvent it defaults and gets debt reduction and is then able to resume fast growth; when a firm is distressed with excessive debt it goes into bankruptcy court and gets debt relief that allows it to resume investment, production and growth; when a household is financially distressed it also needs debt relief to be able to have more discretionary income to spend. So any unsustainable debt problem requires debt reduction. The lack of debt relief to the

distressed households is the reason why this financial crisis is becoming more severe and the economic recession - with a sharp fall now in real consumption spending – now worsening. The fiscal actions taken so far (income relief to households via tax rebates) do not resolve the fundamental debt problem because you cannot grow yourself out of a debt problem: when debt to disposable income is too high increasing the denominator with tax rebates is ineffective and only temporary; i.e. you need to reduce the nominator (the debt). During the Great Depression the Home Owners' Loan Corporation was created to buy mortgages from bank at a discount price, reduce further the face value of such mortgages and refinance distressed homeowners into new mortgages with lower face value and lower fixed rate mortgage rates. This massive program allowed millions of households to avoid losing their homes and ending up in foreclosure. The HOLC bought mortgages for two year and managed such assets for 18 years at a relatively low fiscal cost (as the assets were bought at a discount and reducing the face value of the mortgages allowed home owners to avoid defaulting on the refinanced mortgages). A new HOLC will be the macro equivalent of creating a large “bad bank” where the bad assets of financial institutions are taken off their balance sheets and restructured/reduced.

A large fiscal stimulus plan and a plan to reduce the debt overhang of distressed home owners will also ease the political economy of the financial bailout: as the debate in Congress showed the US public is mad about a system where gains and profits are privatized while losses are socialized, a welfare system for the rich, the well connected and Wall Street. Bernanke and Paulson and the US administration did a lousy job in explaining why partially bailing Wall Street is necessary to avoid severe collateral damage to Main Street in the form of a most severe recession and a risk of an even more severe economic stagnation. At least the redesign of the TARP into a program that will recapitalize banks with public capital (and thus provide the US government and the taxpayer with some upside potential) makes this bailout more socially fair and acceptable.

But the current collapse of private aggregate demand makes it fair, necessary and efficient to directly help Main Street with a direct fiscal stimulus program and with a plan to reduce the debt burden of distressed home owners. Those two additional policy actions are necessary and fundamental – together with the rescue and recapitalization of financial institutions – to minimize the damage to the real economy and to the financial system.

The Risks of a Global Stag-Deflation (Stagnation/Recession and Deflation)

Another important risk that the economy faces – and that suggests the need for a large fiscal stimulus is the risk of a recession associated with price deflation. Last January – at a time when the economic consensus was starting to worry about rising global inflation - I wrote a piece titled [Will the U.S. Recession be Associated with Deflation or Inflation \(i.e. Stagflation\)? On the Risks of “Stag-deflation” rather than “Stagflation”](#) where I argued that the US and other economies would soon have to worry about price deflation rather than price inflation.

As [I put it at that time last January](#):

the S-word (stagflation that implies growth recession cum high and rising inflation) has recently returned in the markets and analysts' debate as inflation has been rising in many advanced and

emerging markets economies. This rise in inflation together with the now unavoidable US recession, the risk of a recession in a number of other economies (especially in Europe) and the likelihood of a sharp global economic slowdown has led to concerns that the risks of stagflation may be rising.

Should we thus worry about US and global stagflation? This note will argue that such worries are not warranted as a US hard landing followed by a global economic slowdown represents a negative global demand shock that will lead to lower global growth and lower global inflation. To get stagflation one needs a large negative global supply-side shock that, as argued below, is not likely to occur in the near future. Thus the coming US recession and global economic slowdown will be accompanied by a reduction – rather than an increase – in inflationary pressures. As in 2001-2003 inflation may become the last of the worries of the Fed and one may actually start hearing again concerns about global deflation rather than inflation.

Let me elaborate next why...

...unlike a true negative supply side shock – that reduces growth while increasing inflation - a US recession followed by a global economic slowdown is a negative demand shock that has the effect of reducing US and global growth while at the same time reducing US and global inflationary pressures. Specifically such a negative demand shock will reduce inflation and across the world because of a variety of channels.

First, a US hard landing will lead to a reduction in aggregate demand relative to the aggregate supply as a glut of housing, consumer durables, autos and, soon enough, other goods and service takes places. Such reduction in aggregate demand tends to reduce inflationary pressures as firms lose pricing power and then to cut prices to stave off the fall in demand and the rising stock of inventories of unsold goods. These deflationary pressures are already clear in housing where prices are falling and in the auto sector where the glut of automobiles is leading to price discounts and other price incentives. Obviously, inflation tends to fall in recession led by a fall in aggregate demand.

Second, during US recessions you observe a significant slack in labor markets: job losses and the rise in the unemployment rate lead to a slowdown in nominal wage growth that reduces labor costs and unit labor cost, thus reducing wage and price inflationary pressures in the economy.

Third, the same slack of aggregate demand and slack in labor markets will occur around the world as long as the negative US demand shock is transmitted – through trade, financial, exchange rate and confidence channels – to other countries leading to a slowdown in growth in other countries (the recoupling rather than decoupling phenomenon). The reduction in global aggregate demand – relative to the global supply of goods and service – will lead to a reduction in inflationary pressures.

Fourth, during any US hard landing and global economic slowdown driven by a negative demand shock the US and global demand for oil, gas, energy and other commodities tends to fall leading to a sharp fall in the price of all commodities. A US hard landing followed by a European, Chinese and Asian slowdown will lead to a much lower demand for commodities

pushing down their price. The fall in prices tends to be sharp because – in the short run – the supply of commodities tends to be inelastic; thus any fall in demand leads to a greater fall in price – given an inelastic supply curve – to clear the commodity prices. And indeed in recent weeks the rising probability of a US hard landing has already led to a fall in such prices: for example oil prices that had flirted with a \$100 a barrel level are now down to a price closer to \$90; or the Baltic Dry Freight index – that measures the cost of shipping dry commodities across the globe and that had spike for most of 2007 given the high demand and the limited supply of such ships – is now sharply down by over 20% relative to its peak in the fall of 2007. Similar downward pressure in prices is now starting to show up in other commodities.

Note that a cyclical drop in commodity prices – led by a US hard landing and global economic slowdown - does not mean that commodity prices will remain depressed over the middle term once this global growth slowdown is past. If in the medium term the supply response to high prices is modest while the medium-long term demand for commodities remains high once the US and global economy return to their potential growth rates commodity prices could indeed resume their upward trend. But in a cyclical horizon of 12 to 18 months a US hard landing and global economic slowdown would lead to a sharp fall in commodity prices. Note that even in the case of oil that is the commodity with the weakest supply response to prices – as the investments in new production in a bunch of unstable petro-states (Nigeria, Venezuela, Iran, Iraq and even Russia) are limited - a cyclical global slowdown could lead to a very sharp fall in oil prices. Indeed while oil today is closer to the \$90-100 range in the last 12 months oil prices drifted downward at some point close to a \$50-60 range even before a US hard landing and global slowdown had occurred. Thus, one cannot rule out that in such a hard landing scenario oil prices could drift to a price close to \$60.

The four factors discussed above suggest that – conditional on the negative global demand shock (US hard landing and global economic slowdown) materializing even the risks of stagflation-lite are exaggerated; rather US and global inflationary force would sharply diminish in this scenario and, if anything, concerns about deflation may reemerge again.

This is not a far fetched scenario as one looks back at what happened in the 2000-2003 cycle. Until 2000 the Fed was worried about the economy overheating and rising inflation risk. But once the economy spun into a recession in 2001 US and global inflationary pressures diminished and by 2002 the great scare became one of US and global deflation rather than inflation. Indeed the Fed aggressively cut the Fed Funds rate all the way to 1% and Ben Bernanke – then only a Fed governor – wrote speeches about using heterodox policy instruments to fight the risk of deflation once and if the Fed Funds rate were to reach its nominal floor of zero percent.

Today, following a US hard landing and a global economic slowdown, the risks of outright deflation would be lower than in the 2001-2003 episode because of various factors: US inflation starts higher than in 2001; the Fed needs to worry about a disorderly fall of the US dollar that may increase inflationary pressures; the rise and persistence of growth rates in Chindia and other emerging market economies implies that – even if such economies likely recouple to the US hard landing – a global growth slowdown will not turn into an outright global recession that would be truly deflationary. Still, while the scenario outlined here – US recession and global

slowdown – may not lead to outright deflationary pressures it would certainly lead to a slowdown of US and global inflation.

The fact that the most likely scenario in the global economy in 2008 is one of a negative global demand shock is the one that is priced by bond markets: if investors were really worried about a rise in US and global inflation – or about true stagflationary shocks – the yield on long term government bonds would have not fallen as sharply as it has since last summer. With US 10 year Treasury yield now well below 4% and sharply falling in the last few weeks it is hard to see a bond market that is worried about global inflation or global stagflation. And while until recently commodity prices pointed to the other directions, recent weakness in oil prices, the cost of shipping commodities and the price of some other commodities also signals that commodity markets are now pricing the risk of a US recession and the risk that – with a lag – a US recession will lead to a broader global economic slowdown.

So in conclusion “stag-deflation” (i.e. low growth or recession with falling inflation rates and possible deflationary pressures) is more likely than “stagflation” (low growth or recession with rising inflation rates) if a US hard landing materializes and leads – as likely – to a slowdown in global demand and growth.

So last January I argued that four major forces would lead to a risk of deflation (or stag-deflation where a recession would be associated with deflationary forces) rather than the inflation risk that at that time – and for most of 2008 – mainstream analysts worried about: slack in goods markets, re-coupling of the rest of the world with the US recession, slack in labor markets, and a sharp fall in commodity price following such US and global contraction would reduce inflationary forces and lead to deflationary forces in the global economy.

How have such predictions fared over time? And will the US and global economy soon face sharp deflationary pressures? The answer deflation and stag-deflation will in six months become the main concern of policy authorities.

First, what has happened in the last few months? The US has entered a severe recession that is already leading to deflationary forces in sectors where supply vastly exceeds demand (housing, consumer durables, motor vehicles, etc.) while now aggregate demand is sharply falling below aggregate supply; the unemployment rate is sharply up while employment has been falling for 10 months in a row; and commodity prices are sharply down – about 30% from their July peak - in the last three months and likely to fall much more in the next few months as the advanced economies recession is becoming global. So both in the US and in other advanced economies we are clearly headed towards a collapse of headline and core inflation.

Is there any doubt about this ongoing inflation capitulation and the beginning of sharp deflationary forces? Take the current views of the economic research group at JP Morgan; this group was in 2007-2008 the leading voice arguing about the risks of rising global inflation, about the associated risks of a global growth reflation and arguing that policy rates would be sharply increased in 2008-2009.

This past week instead this JP Morgan research group published its latest global economic outlook arguing that **we are headed towards a global recession, negative global inflation and sharply lower policy rates in the US and advanced economies** (a 180 degree turn from its previous position). As written in the most recent JP Morgan Global Data Watch:

“A bad week in hell

*Increasingly, the signs point to a **deep and synchronized global recession**. Today’s reported slide in UK 3Q08 GDP is expected to be followed by contractions in the United States (next week), the Euro area, and Japan—confirming that the global downturn began last quarter. More troubling is the **additional loss of momentum at quarter end, combined with collapsing October survey readings**. These developments appear to be part of a **negative loop in which economic and financial weakness are feeding on each other, making the prospects for growth in the coming months decidedly grim**. Once again we have taken an axe to near-term growth forecasts for the developed world and will likely follow up with additional downward revisions for emerging market economies in the coming weeks. Already, **our forecasts suggest that global GDP will contract at a near 1% annual rate in 4Q08 and 1Q09**.*

*It is still too early to accurately gauge the depth of the downturn, as the outlook depends on how well policy actions contain the financial crisis. From a US perspective, our current forecasts place the contraction in GDP somewhere between the last two mild recessions and the deep contractions of 1973-75 and 1981-82. This picture masks the degree to which the pain of the current downturn is falling on households. From the perspective of wealth losses and declines in real consumption, **the current recession is likely to prove more severe than any of the previous ten in the post World War II era** (see Special report: How deep is the ocean? Gauging US recession contours). For Western Europe, the current downturn is currently projected to look similar to the one in the early 1990s—the last episode in which regional GDP contracted...*

Inflation and real policy rates to go negative

*With part of this year’s slide in global growth linked to an inflation shock, the recent collapse in global commodity prices should be seen as an important factor cushioning the downturn. In the six months through August 2008, global consumer prices rose at a 5.6% annual rate, prompting stagnation in real consumption across the globe. **Based on recent moves in the price of oil and other commodities, it is likely that the coming six months will see headline inflation dip below zero**. While this swing will be a plus for consumers across the globe, it is also a development that will promote a significant growth rotation towards the G3 and Emerging Asian economies that were hurt most severely by this negative shock. **In the developed world, this backdrop of contracting GDP, collapsing inflation, and financial market stress opens the door to a powerful monetary policy response** (emphasis/bold added).*

So the leading supporters of the view that the global economy risked rising inflation, rising growth reflation and sharply higher policy rates to fight this inflation are now predicting a global recession, global deflation and sharply falling policy rates. What a difference a year makes.

Is there any further doubt that we are headed towards a global deflation or – better – a global stag-deflation? Aggregate demand is now collapsing in the US and advanced economies and sharply decelerating in emerging markets; there is a huge excess capacity for the production of manufactured goods in the global economy as the massive and excessive capex spending in China and Asia (Chinese real investment is now close to 50% of GDP) has created an excess supply of goods that will remain unsold as global aggregate demand falls; commodity prices are in free fall with oil prices alone down over 50% from their July peak (and the Baltic Freight Index - the best measure of international shipping costs - is 90% from its peak in May); while labor market slack is sharply growing in the US and rising in Europe and other advanced economies.

And what are financial markets telling us about the risks of stag-deflation?

First, yields on 10 year Treasury bonds fell by about 50bps since October 14th getting close to their previous 2008 lows; also two-year Treasury yield have fallen by about 150bps in the last month. Second, gold prices – a typical hedge against rising global inflation – are now sharply falling. Finally, and more importantly, yields on TIPS (Treasury Inflation-Protected Securities) due in five years or less have now become higher than yields on conventional Treasuries of similar maturity. The difference between yields on five-year Treasuries and five-year TIPS, known as the breakeven rate, fell to minus 0.43 percentage points; this is a record. Since the difference between the conventional Treasuries and TIPS is a proxy for expected inflation the TIPS market is now signaling that investors expect inflation to be negative over the next five years as a severe recession is ahead of us.

So goods markets, labor markets, commodity markets, financial markets and bond markets are all sending the same message: stagnation/recession and deflation (or stag-deflation) is ahead of us in the US and global economy.

So, we should not be surprised if six months from now the Fed and other central banks in advanced economies will start to worry – as they did in 2002-03 after the 2001 recession – about deflation rather than inflation. In those years where the US experienced a deflation scare Bernanke wrote several pieces explaining how the US could resort to very unorthodox policy actions to prevent a deflation and a liquidity trap like the one experienced by Japan in the 1990s. Those writings may have to be soon carefully read and studied again as the US and global economy faces its worst recession in decades and as deflationary forces envelop the US and other advanced economies. It is also highly likely that as deflationary forces mount the Fed will have to cut the Fed Funds rate even further: as I have argued for a while at the bottom of this business cycle the Fed Funds rate is likely to be closer to 0% than to 1%. Indeed, if the Fed cut the Fed Funds rate to 1% during the last recession that was short and shallow it will cut this rate much further if – as likely – the recession will be much more severe and protracted this time around.

Finally, while in the short run a global recession will be associated with deflationary forces shouldn't we worry about rising inflation in the middle run? This argument that the financial crisis will eventually lead to inflation is based on the view that governments will be tempted to monetize the fiscal costs of bailing out the financial system and that this sharp growth in the

monetary base will eventually cause high inflation. In a variant of the same argument some argue that – as the US and other economies face debt deflation – it would make sense to reduce the debt burden of borrowers (households and now governments taking on their balance sheet the losses of the private sector) by wiping out the real value of such nominal debt with inflation.

So should we worry that this financial crisis and its fiscal costs will eventually lead to higher inflation? The answer to this complex question is: likely not.

First of all, the massive injection of liquidity in the financial system – literally trillions of dollars in the last few months – is not inflationary as it is accommodating the demand for liquidity that the current financial crisis and investors' panic has triggered. Thus, once the panic recedes and this excess demand for liquidity shrinks, central banks can and will mop up all this excess liquidity that was created in the short run to satisfy the demand for liquidity and prevent a spike in interest rates.

Second, the fiscal costs of bailing out financial institutions would eventually lead to inflation if the increased budget deficits associated with this bailout were to be monetized as opposed to being financed with a larger stock of public debt. As long as such deficits are financed with debt – rather than by running the printing presses – such fiscal costs will not be inflationary as taxes will have to be increased over the next few decades and/or government spending reduced to service this large increase in the stock of public debt.

Third, wouldn't central banks be tempted to monetize these fiscal costs – rather than allow a mushrooming of public debt – and thus wipe out with inflation these fiscal costs of bailing out lenders/investors and borrowers? Not likely in my view: even a relatively dovish Bernanke Fed cannot afford to let the inflation genie out of the bottle via a monetization of the fiscal bailout costs; it cannot afford/be tempted to do that because if the inflation genie gets out of the bottle (with inflation rising from the low single digits to the high single digits or even into the double digits) the rise in inflation expectations will eventually force a nasty and severely recessionary Volcker-style monetary policy tightening to bring back the inflation expectation genie into the bottle. And such Volcker-style disinflation would cause an ugly recession. Indeed, central banks have spent the last 20 years trying to establish and maintain their low inflation credibility; thus destroying such credibility as a way to reduce the direct costs of the fiscal bailout would be highly corrosive and destructive of the inflation credibility that they have worked so hard to achieve and maintain.

Fourth, inflation can reduce the real value of debts as long as it is unexpected and as long as debt is in the form of long-term nominal fixed rate liabilities. The trouble is that an attempt to increase inflation would not be unexpected and thus investors would write debt contracts to hedge themselves against such a risk if monetization of the fiscal deficits does occur. Also, in the US economy a lot of debts – of the government, of the banks, of the households – are not long term nominal fixed rate liabilities. They are rather shorter term, variable rate debts. Thus, a rise in inflation in an attempt to wipe out debt liabilities would lead to a rapid re-pricing of such shorter term, variable rate debt. And thus expected inflation would not succeed in reducing the part of the debts that are now of the long term nominal fixed rate form. I.e. you can fool all of the people some of the time (unexpected inflation) and some of the people all of the time (those with long

term nominal fixed rate claims) but you cannot fool all of the people all of the time. Thus, trying to inflict a capital levy on creditors and trying to provide a debt relief to debtors may not work as a lot of short term or variable rate debt will rapidly reprice to reflect the higher expected inflation.

In conclusion, a sharp slack in goods, labor and commodity markets will lead to global deflationary trends over the next year. And the fiscal costs of bailing out borrowers and/or lenders/investors will not be inflationary as central banks will not be willing to incur the high costs of very high inflation as a way to reduce the real value of debt burdens of governments and distressed borrowers. The costs of rising expected and actual inflation will be much higher than the benefits of using the inflation/seignorage tax to pay for the fiscal costs of cleaning up the mess that this most severe financial crisis has created. As long – as likely – as these fiscal costs are financed with public debt rather than with a monetization of these deficits inflation will not be a problem either in the short run or over the medium run.

Given the risk of a deflationary and recessionary spiral in the economy – like the one experienced by Japan in the 1990s after the bursting of its real estate and equity bubble – it is essential to prevent such destructive price deflation from occurring. Thus risk of a deflation is additional argument in favor of an aggressive fiscal stimulus package; such package will reduce the risk of such destabilizing deflationary spiral.