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**AFTER HUBRIS, SMOKE AND MIRRORS, THE DOWNWARD
SPIRAL:**

Financial and real markets pull each other down; how can policy reverse
this?

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1. Introduction

Starting in the 1980s, the liberalization of capital markets intensified under the influence of largely conservative governments. But the conservatives were not alone; political liberals tended to agree with the general push for deregulation. A new consensus formed, hailing the magic of markets.ⁱ The Clinton Administration was cautious, but tended to agree, at least up to a point. Bush II pushed deregulation and market worship to new heights.

Yet right from the beginning, many countries fell into major episodes of financial instability, as boom and bust cycles blossomed, taking a devastating toll on economic activity. There was the Latin American debt crisis of the 1980s, the US Crash of 1987, the Japanese real estate and stock market crisis (and trap) in the 1990s, the British Housing crash in 1991, the Mexican Peso Crisis of 1994, the long-running Russian crisis of the mid-90s, the Asian Crisis of 1997/8, the High Tech Crash in the US Stock Market in 2000, and the Argentinian Crisis in 2002 among many others, large and small. Behind most of those boom-bust cycles stands the instability of credit, as Kindlebergerⁱⁱ has termed it. When financial markets collapse and credit dries up, real economic activity tends to decline, bringing large output losses and a terrible impact especially on low income households and small businesses, indeed, on all those unable to

insure themselves against large financial and real shocks.ⁱⁱⁱ And this real-side downturn then reacts back on financial markets.

Since 2007, the US has had to deal with the bursting of the real estate bubble (as have Spain and the U.K.) and the world has had to face the widespread fall-out, triggering credit and banking crises. After the financial meltdown, there generally comes the meltdown of the real sector. Even worse, in the present case there may be more to come – the real-side meltdown may develop into a long and deep recession in the U.S. and many other economies. Policymakers have turned hyperactive, hoping to design monetary and fiscal plans that will prevent the anticipated deep downturn from becoming a 1930s type depression. The Obama Administration is taking the lead in this: what policies are being enacted and will they be successful?

2. The Financial Market Meltdown: A Typical Boom-Bust Cycle?

Starting in the 2007, the US financial crisis quickly spread and became global. It is deeply rooted in the decades` long liberalization of financial markets, leading to excesses and the widespread misuse of those markets for rent-seeking.

The financial industry had largely abandoned its role as a service industry, one that supposedly charged reasonable fees for the services of spreading risk and allocating capital and credit. Instead it came to provide a market for corporate control – mergers and acquisitions – and it effectively opened a casino for betting on or hedging practically any kind of risk – the derivatives market. In addition a new shadow banking system has arisen, organized to evade regulation and supervision, offering new financial instruments that were put on the market without being well understood by their users or even their initiators. Financial derivatives, Mortgage Backed Securities (MBS), Collateralized Debt Securities (CDS), Collateralized Debt

Obligations (CDOs), and so on, have clearly been over-issued, under-collateralized and generally misused. Dazzled by new mathematical models financial institutions claimed they needed no regulation because their new products conquered risk. The market would see to it that exactly the right amount of risk would be bought and sold at the correct prices in equilibrium. The market will do the job of the regulators. In addition even regulatory institutions (such as the SEC) argued that the Rich will properly take care of their own money--- they don't need extensive regulations. Yet, forgotten were the disastrous externalities of financial failures.

Obviously, many of these new instruments are useful. But, on the other hand, some critics argue not only that their limitations were not appreciated, but that they were misconceived, as well: the formulas for pricing and using them rested on unacceptable assumptions about the nature and distribution of risks and how these entered into pricing.^{iv}

The fraction of the American economy making up the financial sector has been increasing for a long time, and rapidly rising since the early 1990s. The larger measure called FIRE – finance, insurance and real estate – has gone from about 11% in the early 70s, to almost 20% today, and finance alone has rise in the last 25 years from under 5% to over 8%. Yet both overall growth and productivity growth have been slower in the decades of high finance than in the 40s, 50s and 60s when finance was heavily regulated and comparatively suppressed. Indeed, there is little or no evidence that the value of its services to consumers and businesses are worth one-fifth of GDP. The growth of finance seems to be largely due, on the one hand, to deregulation, leading to liberalization of capital accounts all over the world, and to financial innovations on the other. Many countries instituted financial regulation after the Great Depression of the 1930s precisely in order to prevent just the sort of instability that we now face. These New Deal regulatory institutions provided public screening and monitoring of the

financial markets, and required firms and banks to adhere to strict standards of accounting and to publicly reveal information on assets, debt and earnings. The theory was that more and better information tamed exuberance and made prices conform to the risks banks were taking relative to their capitalization. Fast unravelling of these long-standing regulations – starting in the 1990s – allowed extreme leveraging on an unprecedented economic scale with untested instruments.^v With insufficient financial market regulation this leveraging carried great and poorly understood risk.

The recent collapse has roots in the inadequate understanding of the new financial instruments, especially subprime mortgages and securitized mortgage instruments. In particular, the risks in these instruments were not correctly assessed and were improperly priced. Insufficient capital was set aside, margins were too low, and insurance was inadequate.^{vi} Some conservatives have objected to this and have tried to locate the origins of the housing and subprime crisis in the Community Reinvestment Act, which called on banks to offer loans to the poorer sections of the population, and provided subsidies to that end. Government pressure is invoked to explain why banks and mortgage companies engaged in widespread *pushing* of loans to households that did not meet normal standards, resulting in excessively risky mortgage paper. This makes no sense. If the subsidies made up for the extra risks, then the loans would have been okay. Further, if the subsidies were not enough to make up for the extra risks, then the banks making the loans should have set aside their own capital to cover the risks or should have pooled funds into an insurance program. In fact, the risks were not priced properly and were not covered. The subsidies were not enough to cover the extra risks and the banks and mortgage companies did not set aside capital or arrange adequate insurance. The issue is not to whom the banks made loans, nor why, but rather why they failed so spectacularly to understand and

properly cover their default risks. To understand this we have to investigate the pricing of risk on the one hand, and the process of securitization, (re-packaging and passing along the risks) on the other. Both were severely flawed.

The flaws in these instruments were then magnified into a credit crisis, leading to a global financial meltdown. Yet even though the current meltdown originated in new financial activities, it has all the makings of a typical boom-bust cycle.

Work by Hyman Minsky^{vii} and Charles Kindleberger^{viii} has shown us the shape of a typical boom bust cycle. It normally starts with overconfidence, leading to undervaluation of risk and overvaluing assets; and, most importantly, these lead on to high leveraging. One needs to distrust the market valuations of financial assets, both at the stage of the build up of the bubble, and at the collapse and the bursting of the bubble. In the recent bust phase of the last cycle, the (imperfectly understood) financial innovation of re-packaged and securitized subprime mortgages resulted in both significantly overpriced houses and securities. Loans were taken against risky asset. In the housing sector the risky loans were sold because they were securitized through CDOs – which were supposed to make the economy safer by spreading risk. Instead, their widespread use in the mortgage market contributed to a typical financial and real estate market bubble very similar to others that the US and other advanced macro economies have seen.^{ix} These bubbles have tended to happen more frequently, the more the financial market has been deregulated.^x

Usually, as a financial bubble develops, asset price inflation and credit expansion move in tandem. The bubble will be particularly pronounced when the financial sector expands more rapidly than the rest of the economy, as has happened in the U.S. starting in the early 1990s. This pattern can be seen in the subprime market: with a low cost of borrowing (low interest rates) and

expected prices of subprime assets rising (due to expected adjustable interest rate etc.), there were strong incentives to hold an excessive amount of subprime CDOs. These conditions also created incentives for banks to finance such holdings through loans (even though the collateral might be suspect): eventual sales of such securities seemed to promise huge profits. Yet, all along, the data on returns from CDOs was scarce, and there were only a few academic studies on how large the expected margins might be, as compared to returns on other assets.

Furthermore, the pricing of these assets compounded through a pattern of interaction known as “relative pricing.” As soon as one investment bank placed a new credit product in the market, other financial market players built on that price, even though it may well have been arbitrary; taking that price as a base they drew on their models, to extrapolate the prices of even more complex products. These prices appeared to be the result of serious financial engineering, backed by sophisticated models. The prices appeared to promise large profits, so a large amount of debt was taken on against very doubtful collateral. Since there was no specific, well-established market to evaluate such assets – or actual profitability of CDOs and their more risky tranches – the initial prices did not have a sound basis and the actual value of the collateral was not known. It is now clear that this practice of “relative pricing” and leveraging was all along inadequate and dangerous.

Moreover, the models used to price credit derivatives were based on artificial default intensities that had no link to the real potential risk of large-scale default if the real estate market went through its natural cycles. So the credit market went down due to unanticipated higher default risk and lower recovery rates. It is now clear that the entire industry severely overpriced credit derivatives and operated with largely overvalued collaterals leading to leverage ratios of

40 to 1 (total value of assets to equity of an investment firm). All this had to come down in a bust.

Financial bubbles have negative effects, in addition to the immediate damage they inflict when they burst. For example, they may produce or enhance uneven income distribution (financial tides lift yachts, but not all other boats) and they may lead to misallocation of resources (e.g. the huge build up of optical fiber in the U.S.). And even before it bursts, the bubble creates financial instability; other sectors may be pulled into unwarranted booms. When a bubble bursts, it generates huge externality effects: falling asset prices in the bubble will pull down other asset prices, the value of collateral will fall, loans will be called in, credit markets will contract, and financial institutions will suffer. Many “innocent” agents – who made no unwarranted or speculative decisions – will have been dragged down, and this has spilled over significantly onto the real side of the economy, reducing employment and output.

A striking aspect of the turmoil has been the extent of weaknesses in risk perception and risk management. There is *idiosyncratic risk* and there is *common risk*. The first applies to the *individual financial institution*. It is the risk arising from high expected margins, based on cheap sources of funding for extremely leveraged speculative or Ponzi positions, often compounded by lack of adequate internal risk assessment in the financial institution itself, and lack of diversification where all parties in an industry follow the same strategies. We also tend to find problems such as lack of sufficient capital requirements, underrated risk by rating agencies, and lack of accountability. A recent example involving most of the above is the way many financial firms were selling Lehman Brothers debt insurance against its bankruptcy. These swaps were assets held by investors for returns and by financial institutions to meet capital requirements and for hedging purposes. Since the risk to Lehman was underappreciated, the swaps’ value are not

known (their value is estimated at \$600 billion), and the size of the losses on these swaps and how they will affect various institutions is still unknown.

The general or *common risk* arises from movement of *the entire market*, such as higher interest rates, falling consumption and investment demand, sudden increases in risk aversion or perception (emerging credit defaults, swaps and spreads rising), correlated risk through the entire market when extreme events (liquidity drought) happen, as during the current crisis.

Widespread build-up of overpricing of securities can then lead to the emergence, even the sudden emergence, of a dangerous level of common risk. In other words, the build up of specific risk can lead to a common risk. The fear of Lehman swap downgrades can lead to more credit problems.

Economists note that bubbles can have good effects depending on their character. For example some bubbles can leave the economy significantly better off as firms invest in productive capacity, which might even include better labor relations with job training and higher wages and income in the long run.^{xi} The recent financial bubble is coincident with slow productivity growth, stagnating U.S. household income, and higher poverty rates, and measures of increased innovation are not readily available. Therefore, it is likely that except for the larger than average growth in office buildings and housing stock, this bubble went too far and will cause tremendous costs in lost output as it bursts. Another cost of a bubble burst is an increasing wariness about financial institutions. Such scepticism can result in a “lost-trust overhang.” We already saw the effects of this in mid October 2008 as people moved away from all financial instruments towards cash, and came to blame or even picket Wall Street financial stewards. Even banks moved away from each other as the LIBOR rate soared. As middle class people fled from

financial markets, they tended to stop accumulating financial assets while we saw banks becoming chary of lending.

To sum up, bubbles in some form may be unavoidable, but overly swollen bubbles will burst in a very costly way. On the other hand bubbles can be contained, and if they are, they may have some positive effects, even enough to outweigh the negatives. This suggests that public discussion should not be directed toward entirely removing or avoiding financial bubbles. First, this may be too much to ask of any government, but second, bubbles don't have to be *suppressed*. However, they do have to be *controlled*.

3. Monetary and Financial Rescue Operations

The most important and immediate actions after the burst of the bubble came from the central banks. As the financial market melt down evolved, this became a great challenge to the central banks. Often the central banks, in spite of their initial denial, are forced to heavily intervene in the financial markets (in the stock market or credit market). Although traditionally only inflation targeting was the proclaimed goal of the central banks, both the Fed and the ECB have recently moved away from this and heavily intervened in the financial market.

We want to note that strong sporadic interventions by the Fed had already been undertaken under Greenspan, since the 1990s. A detailed evaluation of the central banks' action with respect to the stock market, during the technology bubble and their potential success or failure can be found in Greenspan's recent book.^{xii}

As well understood at that time, of course, monetary authorities cannot and should not target specific levels of asset prices. There are fundamentally justified movements in asset prices – for bond prices, credit costs, stock prices and exchange rates. Although asset price

misalignments are difficult to measure (see the BIS survey), as are potential output, future inflation rates and equilibrium interest rates, this should be no reason to ignore them.^{xiii} Monetary authorities should help to provide stability for the financial market and reduce the likelihood of financial instability. In the earlier literature, looking at the 1990s, this was discussed with respect to the extreme changes in asset prices, in particular stock prices.

Now, with the outbreak of the credit crisis triggered by the subprime sector and the subsequent financial melt down, in particular in the credit sector, central bank intervention in the credit sector became a major issue. Traditionally, the only agreed-upon goal of the central banks was inflation targeting, yet recently both the Fed and the ECB undertook drastic actions – and also coordinated world wide actions – to prevent the credit crisis from spreading and a financial market melt down. Starting with November 2007, joint actions of Western central banks were undertaken to provide more liquidity for the private sector, in particular for the banking sector, given the clear sign of a credit crunch. Moreover, the US Fed provided more liquidity in the first quarter of 2008. The first was a plan to inject \$200 billion which then actually led to assisting in the bail out / takeover of Bear Stearns by JP Morgan in the middle of March. Overall, up to the time this paper was written, at the beginning of 2009, the short-term interest rate in the US had been brought down from 5.25% to 0.25%.

For many observers, this change in direction of monetary policy from inflation targeting to heavy intervention in the financial market did not come without surprise. Yet Ben Bernanke, now the Fed Chair, had already written academic papers that advocated strong intervention by the central bank in case of a financial market meltdown.^{xiv} Already in his earlier papers Bernanke (and his co-authors) had put forward the view that the central bank should buy private assets if it had come to an end of its interest rate policy. This not only would prevent a further fall in asset

prices but, in particular, drive down the long-term interest rate. (Normally the Central Bank only controls the very short-term “overnight” rate.) Though the paper originally was written with an eye on the long period of Japanese stagnation – starting in the 1990s, when the zero inflation rate and almost zero interest rates did not leave any room for monetary policy – Bernanke (and his co-authors) already hint at a possible US application. Now, in fact the US central bank has been applying this non-traditional monetary policy, the success of which still has to be judged in the future.

On the other hand, the European Central Bank, the ECB, has always been more conservative in its monetary policy stands, first in strictly applying the so-called ‘two pillar concept’, and second giving more attention to the inflation rate than to output or the financial market and the possible externalities in its impact on the real economy. The two-pillar concept is that the ECB kept the Bundesbank tradition of controlling the money supply, (in some ways the Bundesbank, widely regarded as very successful, is seen as the ECB’s predecessor), but at the same time it pursued direct inflation targeting through discretionary interest rate setting. Recent developments in the financial markets, and spillovers of the financial meltdown to the rest of the EU, have tested whether the ECB is equipped to deal with severe financial market turmoil. Peter Praet, an official of the Belgium Central bank, stated already in March 17, 2008 at the London School of Economics, “If a major European (financial) institution were to get into trouble, the institutional mechanism that are in place could be too weak to handle it.”^{xv} In the course of the further financial meltdown in Europe, this has been proved to hold true. Although the ECB provided liquidity in a massive way since the Fall in 2007, it did not move the interest rate significantly down before the first week in December 2008 – then down from 3.5%, now 1.5% –

the lowest in the EU area for 11 years. The Fed, as above noted, was more aggressive right from the beginning, cutting rates from 5.25% in summer 2007 to 0.25% now.

Overall, the claim of the recent monetary consensus – that the central banks should restrict themselves to inflation targeting (with only a little weight to output targeting) - came under stress first in the 1990s, but has been particularly criticized since the outbreak of the subprime crisis and the ensuing credit crunch and financial collapse . It would indeed be far too easy to suppose that the modern central bank could simply undertake some fine tuning of the economy, engineering interest rate changes in some direction or other in order to magically steer the economy toward a steady position based on the “natural rate of unemployment.” As Ned Phelps, the Nobel Laureate in Economics of 2006, often argues: in a dynamic capitalist market economy, there is too much uncertainty as to what “the natural rate of interest” might be, and what the medium run “natural unemployment rate’ will be, for the economy to be regulated and kept from high inflation by relying on these ideas. Both “natural rates” are “always shifting, temporarily or permanent, with new developments.”^{xvi}

But the traditional picture of the central bank as the ‘independent’ expert monitoring the economy faces a new challenge. Not only are the consensus ideas under severe scrutiny, we now have, a new and very serious problem facing central banks: they must cope with the meltdown of the real sector arising from the meltdown of the financial sector. The externalities of financial markets can no longer be ignored.

In the U. S., in spite of fast action by the Fed and the Treasury, we can also see tremendous failures: the failure of the Wall Street bailout to demand specific actions by recipients, to monitor the use of funds through oversight boards, to prevent huge executive bonuses – bonuses added up to the amount of the bailout for a group of banks. Moreover, in spite

of pumping huge funds into Wall Street firms, credit has not loosened up; and observers seem to agree: one cannot find out what happened to the money.

As to the banking system, its first and foremost role is to provide credit and liquidity. A safe banking system is needed for the operation of both the real economy and the financial markets. Yet, banking cannot exist in its modern form without regulation and supervision. The idea of “free banking” is a myth – or rather harks back to an era in which banks provided safekeeping services, but did not provide the greater part of the money supply. Money is a public good, Taking deposits and making loans is a business. But the fact that deposits are the basis of the payments system constitutes a major externality. The day to day working of the economy depends on the payments system. If the smooth working of that system is undermined the effect on the economy is likely to be disastrous.

Banks depend on trust, and trust in turn is greatly strengthened by effective regulation and enforcement of well-designed rules. Banking customers and money market participants must be certain that banks and financial institutions will behave honestly. If they do not they will be penalized.

Ineffective or ill-designed rules and regulations, on the other hand, will not support trust, may permit unfair and dishonest practices, and worst of all, may not prevent the build-up of excessive risk. When such risk comes home to roost, a lot of businesses and consumers that had nothing to do with the decisions to take on that risk will end up paying a heavy price. So “deregulation” is dangerous, and has, indeed, proved unwise. The changes in regulations allowed for more risk taking by banks and money market funds, with the result that a large fraction of the credit essential to running the economy has dried up, creating problems for businesses and

households that had nothing to do with the taking on of excessive risk. This is a major “negative externality,” which is neither fair nor reasonable.

Why should the institutions that manage the payments system be allowed to take on risks in the pursuit of profits – profits which they do not share with the rest of the economy – at the expense of the general public? The payments system should be recognized as a public good, and should be managed, not for profit, but in the public interest. Private enterprise may have a role in banking, but the pursuit of private profit must be carefully subordinated to the public interest. Market forces in banking may well tend to bring about the public good in banking as in other areas, but they may also run out of control, as we are seeing now. So it is essential that the operation of the payments system, and related institutions, be subject to careful supervision and control.

Since the end of last year, central banks have tried to help the private banking sector with an extraordinary injection of liquidity, even including the purchase of bad assets, for example from Bear Stearns. But this has not worked. The contagion of financial panic continues, sometimes subdued, but on occasion, virulently. The G-7, anticipating dire consequences to financial markets, met in April 2008 to consider recommendations of the Financial Stability Forum. But nothing happened, only a declaration, and this had no effect.

In early Fall, the EU Parliament required the EU commission to draft new directives for strengthening and harmonizing financial regulations in Europe. In the US, in September, Secretary Paulson brought to Congress a \$700 Billion rescue plan to bail out failing investment banks. Initially the idea was to buy up their non-performing assets. Congress rejected this, accelerating the stock market downturn. Then it accepted a modified version, including capital injections into weakened banks, as proposed in the UK. By this time the contagion had already

spread, first to the UK and then to Europe. The guarantee of bank deposits by the Irish Government had put the UK and other EU Countries under pressure to do the same. The electronic bank runs became too dangerous. The twenty-seven Head of States of the EU met in Paris at the beginning of October to suggest a joint rescue plan for Europe and the global economy. The G-7 followed this up and put forward the suggestion of a new international financial architecture to be decided by a summit meeting in December 2008 in New York. Although some core European countries (UK, France, Germany) decided on national guarantees for bank lending operations and agreed to guarantee deposits, this was not enough to calm the stock market or loosen up the credit markets.

As these efforts took place credit around the developed world became frozen. To build up confidence, the US treasury took additional action to purchase stocks of investment firms and banks threatened by bankruptcy. This only helped a little to calm down the stock market and improve the climate for credit. But now a real recession is looming on the horizon, calling not only for a rescue plan but also for a new and stronger stimulus package. The next G20 meeting is planned for beginning of April 2009 in London. There are two big items on the agenda -- a continuation of the efforts to organize a new world financial order with new financial regulation, and the effort to develop a world wide stimulus package. Unfortunately European enthusiasm for both of the big items has seemed to dissipate in the shadow of the fear of deficits, even though almost all major economies are still declining. As of now, neither the prospects of recovery nor of protecting the payments systems of the world are very bright.

4. The Meltdown of the Real Sector

Meanwhile, disaster has been developing on the real side of the economy. As recent events have shown, (recognized also in recent academic debates), large externalities and contagion effects normally arise from financial instabilities – these can be seen either in the case of the stock market (as in the 1990s)^{xvii} or currently in the credit market, for example as now triggered by the subprime crisis. In the US trouble started with the subprime crisis and then continued with a credit market meltdown, the effects now spreading to the real side of the economy. One could observe the following sequence:^{xviii}

- The current financial market bubble and its bursting originated in low interest rates, rapidly rising household debt and foreign debt of the US economy, leading to a bubble in the housing market (high housing prices compared to historical price rent ratios).
- That bubble was then accelerated by the outsourcing of risk due to the securitization of mortgages (that have been packaged and sliced in risky securities of different types, CDOs).
- Expectation of high returns from investment in real estate and CDOs were kept rising (by low interest rates, low default rates and high discovery rates).
- Liquidity in the housing sector (and financial market) was pumped up by capital inflows from abroad.
- The bursting of the bubble was triggered by Bear Stearns` hedge funds failure, triggering a credit crunch in the banking sector in the U.S. and UK (Northern Rock in UK). Later in September of 2008, the bankruptcy of Lehman Brothers accelerated the

credit crunch and the meltdown of the banking sector, entailing a worldwide downward trend of the stock market.

- This was accompanied by a sudden rise of default risk and risk premia; as these began shooting up, the credit crunch became more severe (as at the beginning of all downturns).

The feedback to the real sector made then production activities and the growth rate of the GDP declining, with further feedback effects from the real to the financial side.

Recessions are almost always triggered by bursting of bubbles, followed by credit and financial crises, but this time financial market and credit crises originated in the housing market and then the troubles were transmitted to the banking sector. This has not always been so. Often a stock market crash triggers the downturn, but not this time. The stock market reaction came later. When the investors in subprime mortgages felt the first fall out, the holders of those securities felt a massive credit crunch (starting with).

Subsequently many big investment banks in the US –and in Europe – were threatened by insolvency or became insolvent (in the US Bear Stearns` hedge funds and Lehman Brothers were liquidated, Merrill Lynch, Citibank, and Morgan Stanley found themselves on the verge of bankruptcy, though they have not fallen – yet.) But the credit crisis and its real downturn has spread to Europe and Asia; there are some near bankruptcies among European banks (such as the Hyporealestate Bank in Germany)., However, Asian financial institutions with a leverage ratio of 13 (instead of roughly 40 as in the US) seem to be less vulnerable than the US banks.

Another problem emerged at the beginning of 2008, when a financial and credit market meltdown began in East- Europe (Hungary, Baltic Statges and others), triggering a sharp

backlash on the in European banking system, which had a heavy exposure to losses in Eastern Europe—a situation that has not been cleared up yet. .

In short, a second wave of meltdowns and insolvencies is still coming, this time in the real sector. The major transmission mechanism is what economists call the multiplier. Consumer and business confidence is falling, borrowing and spending for consumption is drastically falling, investment falls, and exports fall (for the US, Europe and Asia). Major industries are in decline worldwide: the construction sector, manufacturing and the automobile industry.

For the US total employment has fallen from the beginning of 2008 to February 2009 by 3.5%, giving rise to an unemployment rate of more than 8%, the fastest and strongest drop of employment since the Great Depression (when employment dropped by roughly 6% in the first year of the downturn). But the true current unemployment rate is even higher; labor economists have noted that we should add *another* 6% for discouraged workers and part-timers).

The manufacturing and construction sectors in Asia, particularly in China and Japan, are also dropping, the production and prices of primary commodities (raw material, like metals, but also oil gas, coal and so on) are falling world wide too. Falling primary prices especially hit developing economies. The credit and real crises thus spread to emerging markets as stock prices fall, as capital takes flight, and credit markets dry up, leading to the likelihood that production and employment will collapse.. Europe has now announced that it is in recession since October 2008. In Japan, industrial production fell 8.1% from

October to November. Since its exports began to fall off, Japan began running into a deep recession too.

All this will have feedback effects on the financial sector again, bringing further insolvencies and problems to Wall Street and the banking system. Furthermore, we see prices now falling, sometimes drastically, especially in the commodity markets, so that the spectre of deflation looms. Deflation generally raises the burden of debt; this can only add to the woes of financial markets.

5. The Fiscal Policy Rescue Operation

The monetary and financial rescue operations have had only modest effects in mitigating the financial and real meltdown. All the Wall Street investment firms underwent a serious crisis, either leading to default (Lehman Brothers) or to takeovers and mergers at bargain prices (for example, Bear Stearns). Wall Street as we have known it is gone; it will not reappear in the same form. Bankruptcies and mergers and acquisitions rescued some investment firms and banks, others, such as Goldman Sachs, had to change strategy: the latter company transformed itself into a traditional bank, by accepting deposits, in order to shelter itself under the umbrella of the Fed. Now the credit constraints are slowly easing, the increase in defaults spreads has stopped and default spreads may start moving down, while the money market is slowly recovering. There has been a huge interest rate reduction from 5.25 to 1 % and now more or less to 0, the government has basically taken over Fannie Mae and Freddie Mac, and it has been purchasing a wide range of securities; one effect is a reduction of the mortgage rate by more than 1%. Yet all this is offset by the decline of aggregate demand and thus sales revenue; because of this collapsing demand, the balance sheets of corporations, in particular the auto industry, have begun to

deteriorate catastrophically and foreclosures of homeowners are on the rise – the real meltdown has not stopped. At the beginning of 2009, it appears to be spreading worldwide.

The remaining hope is now fiscal policy, namely public expenditures and employment programs. Fiscal stimulus plans have been proposed during the late stage of the presidential campaign, by both McCain and Obama. But following the decisive electoral victory by Barack Obama, the discussion in the US and worldwide, has focused on Obama's stimulus plan. The US GDP amounts now to roughly 15 trillion dollars, and the total US Federal debt has surpassed 10 trillion. Since the Iraq war and the Bush tax cut, the federal budget has run on average a roughly \$400 billion deficit every year since 2003. The bailout policies, loan guarantees, and purchase of bad assets by the Fed and the Treasury – starting with the Paulson Plan – is estimated to cost roughly 7 to 8 trillion dollars. This result will be a public debt to GDP ratio of about 120 to 130%, reaching roughly the level of the Japanese debt burden a few years ago. Given this enormous amount of accumulated public debt from the Bush administration and the financial crisis, it was not be easy to push new spending programs through Congress, especially the Senate.

Yet the financial and real crash has taken on such dimensions that a speedy, effective and well thought-through expenditure and employment program was needed. The expenditure and employment program of the incoming Obama administration has been scaled up from the initial level of \$500 billion to between 800 billion and one trillion dollars. This would mean that 6% of GDP would be used for the fiscal stimulus package. The planned program is a mixture of short-term and long-run objectives and has built in many elements of the economics program for the US presented by Obama during the presidential campaign. Notably these include:

- Short-run rescue operations: for example increase in unemployment benefits (unemployment now moved up to roughly 7%) and rescue operation of local and State governments (that now face terrible budgetary problems).
- Building up the growth potential for the US economy, in accordance with a long-run vision. This means supporting R&D, including green R&D as well as basic research. It also means investment in physical infrastructure (like repairing roads and bridges), and restructuring the economy to avoid higher energy prices. And it means investment in improving schools and the educational sector in general.
- Expenditure for energy independence and reversal of climate change: this means investment in alternative energy resources, promotion of more fuel-efficient cars, and CO2 reduction through either new energy sources or new technologies.
- Tax cuts for the middle class: a “middle class” tax cut, for incomes below \$250,000 may amount to \$100-200 billion. The aim will be to give large rebates or reductions in tax rates, in order to increase direct spending.

Will the stimulus package and employment program be effective? This is one of the hardest – and most important – questions to answer. The actual multiplier effects on employment will essentially depend greatly on the extent to which other countries join in and support the stimulus and employment program. The EU is planning a stimulus package up to \$400 Euro. Japan and China have begun planning massive spending programs. But the credit market meltdown must also be reversed so that borrowing and lending are revived.

Two observations; one short-run, one long-run. First, this program does not seem to provide much *immediate* impact. Some have suggested adding a temporary holiday on FICA

taxes, to put spending money directly into the economy,^{xix} but the idea has not caught on.

Second, the stability of the economy can be significantly improved by building in more and better “automatic stabilizers.” Programs of public service employment can be adapted to this purpose. These are sometimes called “Employer of Last Resort” programs^{xx}.

To sum up: financial markets and the real side of the economy interact, and each affects the other. Sometimes a downturn starts from the real side and then financial markets tend to make the downturn worse. But this time the credit market meltdown has brought on a real collapse. We can see how well thought out and well-executed policies might reverse this; but we still have to ask, when recovery comes, what new regulations are needed and what kind of financial sector do we want? Could it be that the problems arose not only from defects and excesses in the financial sector, but also from *what the financial sector does when it is working properly*? Thus the crucial issue is the degree of regulation and oversight, the structure and the size of the financial sector – an issue that the next administration will have to face in the long-run.

6. The Crucial Long Run Issue: The Role of the Financial Sector

Financial Sector and Capital Flows

Supporters of financial deregulation make the argument that free capital mobility will encourage the development of financial markets in both the advanced countries as well as emerging countries. This, it is claimed, makes it easier to mobilize savings, lower capital cost and increase investment not only inside but also across countries, which improves productivity and raises GNP. As already seen, however, financial markets do not normally mobilize savings, diversify risk and allocate capital to the best investment opportunities. That is an old story – or

maybe a fairy tale. What the recent financial institutions more commonly did was act as centers for speculation and opportunistic takeovers, both of which can and do lead to more risk, instability and uneven development.

A curious feature of this debate is the loose sense in which the word “capital” is used. Proponents of financial markets in emerging economies urge that restrictions be lifted on “short-term capital flows.” They get a respectful hearing because “Capital” sounds impressive and “capital development” is what we want to promote. Officials and the public might not be so favorable if asked to approve free flows of speculative hot money.

Indeed, “hot money” is the more accurate term. Capital is created by an act of saving; it is a net asset. Meanwhile, most of the unregulated funds being blown around the world by the winds of speculation are not created by savings and do not represent net assets. These funds consist of money created by banks on the basis of balance sheets, where liabilities offset assets. (Money creation is widely misunderstood; modern money – fiat money – is different from older forms of money, and is more easily created for speculative purposes.) The important point is that countries and sectors are not receiving flows of useful capital but are being battered by storms of hot money when bubbles arise. These storms are driven mostly by speculative greed; the motivating force has little to do with the allocation of savings or with proposals for development. Indeed, it is widely believed that the current levels of hot money are increasing risk and destabilizing world financial markets. Moreover, such instability creates uncertainty about the future of interest rates and asset prices, and this actually contributes to an atmosphere where long-term investment may be delayed or withheld.

Short-term money flows – hot money - are based on speculation and money creation. Hot money provides little support for development and growth, while frequently fueling dangerous

financial activity or hyper-activity, such as real estate and stock market booms, futures market booms, and derivative bubbles. Money rushes into asset markets when the asset prices are rising, or are expected to rise – and it pulls out just as suddenly when the asset prices stop rising and begin to fall. For any countries, but especially for developing ones, both influx and efflux can bring trouble: the influx of money tends to drive up exchange rates (which can damage export industries), borrowing in foreign currency and current account deficits, and the sudden outflow leads to a collapse of asset values, exchange rate drop and credit and banking crises, all tending to pull down the real side of the economy. This kind of hot money movement figured prominently in the Asian Crisis of the mid-1990s, where economies that had been doing quite well without any influx of short-term foreign funds, opened themselves up to financial inflows. As a result they experienced first a financial boom, and then a severe crash, which brought bankruptcies and unemployment and a substantial fall in real output.

By contrast, long-term capital flows based on savings and aimed at permanent investment can be highly constructive. But even some long-term capital flows may not be so desirable, such as capital flows tied to absentee owners seeking opportunistic returns. These are unlikely to target constructive long-term results. Of course investors want to maximize their field of opportunity. But their interest in freedom to move funds whenever and however they like must be balanced against the need of the system for stability. It is usually wise to promote indigenous, as opposed to absentee, investment. Local investors can be expected to offer more support for agendas constructive to the long-term welfare of their own developing nation. This encourages positive spillovers to regional enterprises and growth in local savings with potential for investment in background infrastructure and institutions such as education, public health, law

and order and public infrastructure. The overall result would then be constructive growth, bringing more options for local citizens to reap the benefits from use of their national resources.

Only long-term direct investment creates the capacity and transfers the technology necessary to accelerate growth in developing economies; short-term “capital” is of little or no help.^{xxi} But, investment must be more than just long-term and direct, it has to avoid the problems of absentee ownership, and it has to encourage and support the spillover effects, the public dimension. It can be private, but it cannot be motivated only by private concerns.

Financial deepening, which means increasing finance in relation to produced goods and services, often means easing regulations on banks and financial institutions, opening stock and bond markets, and encouraging secondary trading in financial instruments and derivatives. Supposedly this will bring about lower interest rates and make credit more widely available, thereby reducing current costs of production and making investment easier. This should expand the economy and raise incomes per capita. But, in fact, if not properly channeled into long run projects, increasing finance seems very often to lead to speculation and risk-build-up, rather than to lending or raising capital for steady productive investment. Eventually this may end up in bubbles, busts and crises.

Is a large financial sector beneficial?

It used to be common to praise those economies that had large manufacturing sectors; countries that did not were urged to invest in manufacturing, to develop heavy industry. Advanced countries have moved away from this position, as technology and the structure of the world economy have changed, but in many quarters this has been replaced by support for a large or growing Information Technology sector. As with manufacturing before, it is generally assumed

that the larger the sector the better it is for the economy. And within the sector, the larger the firms, the greater the economies of scale. Why should the same not be true for finance? The relevance of this question should be plain: in the last three decades the size of the financial sector relative to the economy as a whole has approximately doubled in most advanced economies. Moreover, at present, more than half of all non-financial debt – households, business and government – is held by the largest 15 financial institutions.

Manufacturing and Information Technology have two characteristics that do commend them. First, both produce “final” products, things for households and consumers that directly serve to enhance productive activities and economic wellbeing. Think of household appliances, cars, televisions, on the one hand, and computers, cell phones, and software, on the other. It is true that both also produce intermediate goods, but these are very often directly productive in the making of final goods. Second, both engender increases in productivity that spread throughout the economy. New processes lead to new products. These sectors tend to generate innovations that can be adapted for use in other areas of the economy.

By contrast, the financial sector – FIRE, finance, insurance and real estate – does not characteristically produce any final products. Loans, bills and bonds, stocks and shares, derivatives, insurance, mortgages and financial services of all kinds are all forms of intermediation with respect to payments and exchanges. They are *costs* of doing business, of bringing final products to households. We want to maximize the output of final products, and we want to *minimize costs*! So we should applaud, not a larger, but a smaller financial sector – provided it does the job adequately.

The financial sector has seen a lot of increased productivity and new products indeed have developed rapidly in recent decades. But these innovations have not led to reductions in

cost. On the contrary, the indebtedness of firms, households and financial institutions has been rising since the beginning of the 1990s, and financial costs, in terms of debt services and financial fees per unit of output, have risen. While these innovations and productivity enhancements may have had some benefits they have not had appropriate cost-reducing spillover effects on the real side of the economy.

The question is thus: what is the optimal size of the financial sector relative to the economy as a whole? At first glance this is a very traditional sort of question, an optimizing question: what is the best size of the financial sector? But “best” in what sense? The obvious answer is “best, in relation to GNP,” in order best to promote growth and development. Other criteria are possible, of course, but this fits with discussions of macro performance. A larger size will have benefits in promoting growth, no doubt, but also costs in terms of the burden of debt and fees, and the question asks how these balance.

Yet in another sense, this is not a conventional optimizing question; it is not analogous, for example, to asking, what is the optimal combination of goods for households? Unlike the household question, the answer will not be reflected in the market strategies of any agents. But this was also true of Robert Mundell’s famous question, what is the optimal currency area? Both that question and this involve balancing costs and benefits, so as to find the best position, not for agents, but for consideration by policy-makers and policy analysts. ^{xxii}

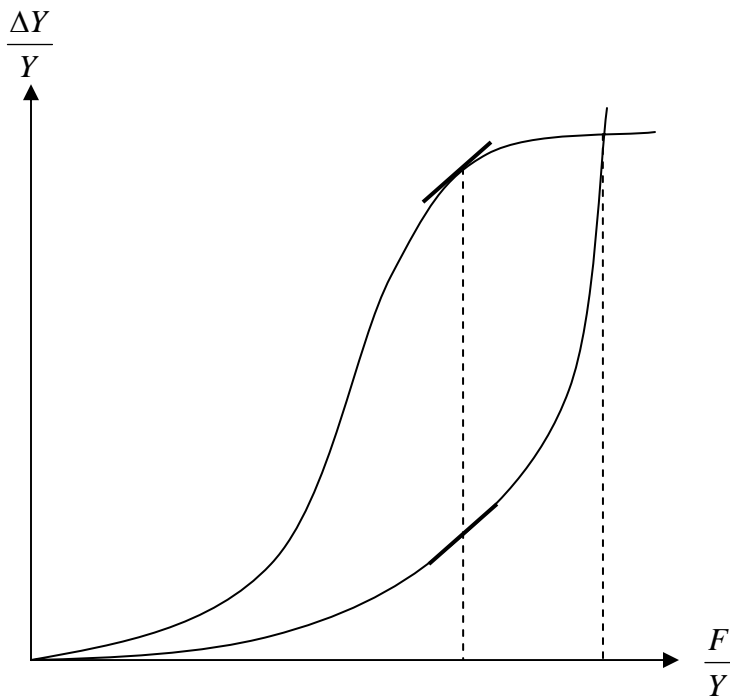
To answer this question we can set up a simple model, a kind of thought experiment, really. To balance the costs of a larger finance sector against the benefits from it, we need first to define each in ways that can be measured. The benefits first. It is safe to assume that there will be benefits. If there were not there would be no market for the services of the sector. Such benefits would include quicker and easier access to finance, faster delivery of services, more

competition - making more finance available, lower financial fees, better spreading out of payments, and more flexible forms of finance allowing for variety in the timing of repayments. All of this will add up to increasing the amount of investment and innovation, raising the rate of growth. Next, consider costs. There will be a tendency to provide excessive finance, to weaker and weaker customers, leading to excessive risk-taking, to speculation and fraud – all leading to substantial losses which in turn, when the losses are included on balance sheets, lead to falling or negative returns and banking failures. All of these will tend to lower growth rates or trigger recessions.

The level of Finance in comparison to total GNP can be expressed as F/Y , where F is the total revenue of the financial sector – banks of all kinds, insurance companies, mortgage companies, real estate agencies, brokerage houses, the stock and bond exchanges. Lay out the ratio F/Y on the horizontal axis and the growth rate on the vertical. Now plot the two relationships, first the benefits relationship, then the costs. In each case we draw the curve with the ratio of Finance to GNP, F/Y , increasing, that is, moving from left to right. We can judge what these curves will look like from our general knowledge of the economy. Then on this basis, we can expect that “benefits,” meaning higher growth because of easier access to finance, will first rise slowly, then accelerate, and gradually fall off, until the curve is flat. (This is known as a “sigmoid curve.”) Costs – lower growth because of greater risk and speculative excess – can be expected to be negligible at first, then they will begin to rise, and as F/Y becomes large, are likely to rise faster and faster. (This might reflect Minsky’s hypothesis of increasing financial fragility, or Kalecki’s notion of increasing risk.)

Next we find the point – the level of F/Y - where the slopes of the two curves are the same. At this point the (declining) marginal increase in benefits, i.e. contribution to growth, just

equals the (rising) marginal increase in costs, i.e. discouragement or undermining of growth. This will be the point at which the *net* contribution to growth made by F/Y is the greatest. At both lower and higher levels of F/Y , the net contribution of the financial sector to overall growth will be less. In particular, at the point where the two curves cross, the net contribution will be zero; the Benefits will be at a higher level than at the optimal point, but they will be wholly offset by the Costs due to excessive risk and speculation. And beyond the point at which the two curves cross, the net contribution will be negative!



This of course is just a thought experiment, but it would not be impossible to obtain indicative statistics.

It does focus our attention, however, on the two curves, and especially on a significant difference between them. The benefits curve reflects matters that are internal to the market, that is to say, the benefits are directly experienced by agents. Borrowers for investment directly

receive the benefits of easier credit, for example. By contrast the costs are often in large part external. The damage done by excessive risk is experienced not only by the risk takers, but by the rest of the market when the risk-takers cannot meet their obligations. The same holds for the effects of excessive speculation. Cost will rise, but the increasing risk is really potential costs, and the costs are calculated by considering the probability of breakdown. But pressure to stop expanding the financial sector will not emerge until these costs materialize in the form of a breakdown or crisis. On the other hand, so long as benefits are increasing, there will be market pressure to continue to expand. Indeed, the incentive to expand will not stop until the marginal benefits are zero! Left to its own devices, then, the market might very well tend to drive the size of the financial sector far beyond the optimal point, even past the point of zero net benefits, to the point where there are no marginal benefits at all (where the benefits curve becomes flat). Indeed, such growth could be seen as cancerous, leading to breakdowns, crashes and crises.

Of course there might be the argument that the above observations hold only for a closed economy. An open economy may increase its financial sector much further by providing financial services for other countries. So, for example one might think that the US economy (or the UK economy for that matter) faces a shrinking manufacturing sector but an increasing financial sector, providing the rest of the world with financial services. It is true that in this case the Costs and Benefits of the financial sector cannot be measured simply with respect to the domestic GNP; the countries that are affected by those Costs and Benefits would also have to be included. But still, we believe our argument can readily be extended: if the expansion of the financial sector is determined by the market, the likely result will be overexpansion and extreme vulnerability of the financial sector, as we have seen in recent history. The financial sector will be too large in relation to GNP, so that Benefits will be out of line with Costs, only to be brought

back into balance by the disastrous “cleansing effects” of financial and real crises. This strongly suggests that the financial sector should be closely regulated, if not—at least temporarily – nationalized, monitored and run as a public service.

Alternative financial institutions: Public development and investment bank

Among economists, members of Congress, policy makers and economic journalists there is a nearly unanimous judgment on responsibility for the current crisis. The mess we are in now can be laid chiefly at the door of Wall St. The private banking system bears great responsibility not only for the financial crisis but also for its impact on the real side of the economy. The banking system failed to control risk properly, (to the contrary – it increased risk), nor did it allocate capital to proper productive uses. It over-leveraged and over-expanded, attracting investible funds to itself, instead of to the real side of the economy, and then it crashed, leading to a terrible loss of liquidity drying up credit everywhere. The real economy was brought down, leading to further contraction in finance. And now the credit shortage is standing in the way of recovery. The critics are already arguing: “A stimulus package that does not unclog the arteries of our banking system will never stimulate sufficiently.”^{xxiii}

Yet, every day there are more and more banks that request a bail out from TARP. But should the hundreds of billions of dollar for the ambitious investment projects, providing employment and securing the future infrastructure of the American economy, be channeled through the very financial and banking system that failed so dramatically to serve the public interest? The system that brought about the collapse in the first place? Why should we try to bring it back into business, when it has performed so badly?

A better way might be suggested: to by-pass the current banking system, and to channel the huge amount of public spending to the real economy through a public development and investment bank.

In the post WW II period, the U.S. helped Europe, in particular Germany with the Marshall Fund. The funds allocated to the Marshall plan greatly helped in the reconstruction of Europe. A similar public development and investment fund could be set up in the U.S. It would have three major objectives: 1) managing the financing of the huge public investment projects, 2) providing loans to the private sector and to firms that see profitable opportunities in the conjunction of the public spending for new infrastructure, and 3) put the deteriorating existing banking system under competitive pressure from a public institution that is well regulated, safe and acting under strong oversight. This could be also done, by taking over the big failing banks, replacing the top layer of management, cleaning up the balance sheets and checking it with proper accounting; then such reorganized banks could serve as public development and investment banks. Due to large lay-offs in the financial sector there is now sufficient 'human capital' possessing the needed financial and accounting skills to staff new or expanded public banks. Either way we could see the development of an alternative, safe way of channeling U.S. taxpayers money into the rebuilding of American infrastructure and increasing employment.

7. Conclusions

The causes of the present crisis are largely to be found in the unregulated development of new financial products and in the over-expansion of the financial sector, in particular the shadow-banking sector, which emerged precisely to avoid regulation. These changes led to lower risk perception, overvaluing of assets, overleveraging, and then to higher actual risk and instability.

But the development of this instability, bringing on a crash, has also led to a collapse of the real side of the economy.

To prevent this happening again, new financial arrangements and new types of regulation are needed. These will require a good deal of thought, with particular emphasis on rethinking the relationship between “public” and “private.” Deregulation has evidently gone too far, leading not only to financial instability, but bringing huge costs to all sectors of the economy..Along with deregulation, privatisation has perhaps also gone too far, for it has contributed as well to instability (think of Enron and electricity pricing); moreover, it also seems to promote inequality, though that is another story.

However, the first step is to get out of the present mess, and for that strong measures will be needed. Because the financial crash has brought the real side of the economy down, more than easy money and improved credit conditions will be needed. There is no point in a business borrowing money – even if the terms are easy – if the business can’t sell the products it is borrowing to make. So we have to move beyond monetary policy and easy credit to fiscal policy.

The Obama transition team has presented a strong case for fiscal stimulus, and the new administration has undoubtedly moved forcefully to increase spending. The proposed package includes both tax cuts and extensive spending measures, which appear to advance most of Obama’s long-stated policy aims. This is excellent in many ways, but so far the program is open to the criticism that it does not seem to have enough *immediate* punch. There is widespread agreement among economists that tax cuts are likely to be saved and used for debt reduction, providing little stimulus. Tax cuts will also erode and narrow the financial space of government in the future. The spending proposals do include a number of “shovel-ready” infrastructure projects, and funds for hiring supplemental help in health-care and education. But how many

jobs? Green investment, it is claimed, can create up to half a million jobs within the year. Not everyone is convinced. Over the longer haul, these projects *will* create 3 to 4 million jobs. But that is only a start. Over 4 million jobs are required to get us back to ground zero, replacing what has been lost in the “great recession” as it is being called now. Those jobs are needed to bring the employment back to pre-recession level, and more will be required to keep pace with labor force growth. As noted above, the funding and financial management of those projects could be organized through a public development and investment bank.

Moreover, to guard against instability, fiscal policy would be simplified and improved if there were a greater scope for automatic stabilizers. In particular some form of “Employer of Last Resort” plan would be a welcome addition.

As regards the financial meltdown two types of corrective activities are taking place. On the one hand, restoring order in the short term – recovery and re-regulation, and on the other, rethinking the financial architecture for the long term. There are many points of discussion, and some agreement, regarding financial market bubbles, new financial architecture and regulations.

We list a few here:^{xxiv}

- 1) Boom- bust cycles cannot be totally controlled, but they should be constrained and the negative externalities of them should be avoided.
- 2) There should be tests, regulation and licensing of new financial tools, such as complex securities.
- 3) The banking regulations and oversight should be stricter and extended to the shadow banks. In particular hedge funds and quasi hedge funds (such as the Madoff investment firm) need registration at the SEC, regulation and strict oversight.

- 4) The leveraging should be restricted and guidelines enforced. Many investment firms had, in the boom period, a leverage ratio of 40 to 1 (measured as total assets to own equity) with little risk management.
- 5) The capital requirements should be increased in particular for complex securities and the provisions for loan losses should be countercyclical: in a boom the loss provision should be increased, in a recession relaxed.
- 6) The personal responsibility in the banking (and shadow) system should be increased, as was introduced by the Sarbanes-Oxley Act of 2001, and oversight boards should be established to screen and monitor balance sheets of the financial sector and banking system, in particular when tax payers money is involved in rescue operations.

Finally, we think the overall size and scope of the financial sector should be limited, and that government – the public sector – should be much better represented, for example by a public development and investment bank. The financial sector has a huge public impact, and this cannot be “optimized” by private markets. Private markets do not advance the public interest in areas where there are large externalities, networks, increasing returns, inequalities and indivisibilities – all of which are evident in the existing private financial sector.

So what can we expect in the coming year, in particular what can we expect from the Obama Administration? Clearly, things may get worse before they get better, but we are seeing a reasonably strong stimulus package from the new administration, together with new regulations, regulatory institutions and public institutions. A further stimulus package may well be needed, and the Administration promises to do what is necessary. But it is hard to say anything more specific.

Will this be a step towards a new progressive policy or will it be more of a rescue operation? Given that the stimulus package is being built from the elements of Obama's policy platform, it will probably be more an effort to institute a new progressive policy. The proposed package and the federal budget for the year 2010 are not a collection of patchwork spending bills; they are put together from a fairly comprehensive picture of desirable new moves in a wide range of fields – education, environment, energy, poverty, medical and health care, infrastructure, and re-organizing the relations between the Federal and State governments, among others. Yet, it has to stimulate the private sector through the right financial institutions. So this is surely meant to be a major step towards setting forth a new progressive agenda. But, of course, it is still hard to be sure.

Notes

ⁱ Just to be clear: we agree, markets can be one of the chief forces driving innovation and productivity, the power behind development. But we do not agree for a moment that they are self-regulating or self-stabilizing – quite the contrary. For an example, consider the “deregulated” – and redesigned – electricity markets promoted by Enron with support of the Bush Administration, in which generating companies sold power to utilities. In these markets, competition appeared to drive prices, not down, but *up*. David Cay Johnston, *Free Lunch, How the Wealthiest Americans Enrich Themselves at Government Expense* (New York: Penguin) 2007, Ch 19, explains this by noting that utilities *had to buy* at specific times, but generating companies did not face a comparable need to sell at those times. This coupled with certain other institutional features led to a very unfavorable balance of advantage for the utilities, even though on the face of it, the markets met the mainstream definition of “competitive.”

ⁱⁱ See Charles P. Kindleberger. *Manias, Panics, and Crashes: A History of Financial Crisis* (New York: John Wiley and Sons, 2005).

ⁱⁱⁱ For details see Paul Krugman, “Analytical Afterthoughts on the Asian Crisis,” mimeo, Princeton University, 1999; “Crises: The Price of Globalization?” *Global Economic Integration: Opportunities and Challenges* (Federal Reserve Bank of Kansas City, 2000), 75–106; *The Return of Depression Economics and the Crisis of 2008* (New York: W.W. Norton, 2008); Marcus Miller and Joseph Stiglitz, “Bankruptcy Protection against Macroeconomic Shocks,” mimeo, The World Bank, 1999; and Willi Semmler, *Asset Prices, Booms and Recessions: Financial Economics from a Dynamic Perspective* (Heidelberg/New York, Springer Publishing House, 2nd edition, 2006).

^{iv} For details on the new complex securities and how they contributed to the current financial and real crisis, see Bernhard, L. and W. Semmler, “The Subprime and Credit Crises,” mimeo, New School, 2008, www.newschool.edu/nssr/cem.

^v With high leveraging risk will be extreme with: 1) inexperienced and loose supervision; 2) no disclosure requirement; 3) no screening and monitoring of financial institutions and 4) no secure safety net for the financial institutions (for example, insurance for bank deposits as enacted for US banks in the 1930s and in Britain and Ireland in the midst of the credit crises in October 2008). MacAvoy and Millstein pointed out the excessive risk as far back as 2004, see Paul MacAvoy and Ira Millstein, *The Recurrent Crisis in Corporate Governance* (Stanford

University Press, 2004). Additionally, politicians, regulators, financial economists and financial market modelers now admit that the financial dynamics of the global economy and its markets has not been sufficiently understood so far.

^{vi} Mortgages as we have known them until recently – 20 and 30 year loans offered by local savings banks, with substantial money down, constant interest rates and uniform monthly payments – developed during the financial reforms of the New Deal. But the mortgage market has changed dramatically, as mortgage brokers have taken over originating mortgages, while securitization has enabled the mortgage paper to be re-packaged and sold to portfolios and funds, instead of being held and administered by local banks. As the mortgage paper passes on, so does the risk – it’s passed along, but the origination fees stay with the mortgage brokers, who therefore have every incentive to make as many loans as possible, regardless of risks. The incentives here are all wrong, with the problems made worse by the systematic miscalculation of risk.

^{vii} See Hyman Minsky, *John Maynard Keynes* (Columbia New York University Press, 1975); *Can it Happen again?* (Armonk, NY: ME Sharpe, 1982); *Stabilizing an Unstable Economy* (New Haven: Yale University Press, 1986).

^{viii} See Kindleberger, *Manias, Panics and Crashes*.

^{ix} These go back a long time: there was the Florida real estate bubble in the early 1920s, the stock market bubble in the late 1920s, the tech stock bubble in the late 1990s, the real estate bubble in the UK in the early 1990s, and the U.S. since 2000, and the bubble in the futures market for oil and other resources, in recent times.

^x The Glass–Steagal Act was introduced in the 1930s, to prevent this sort of bubble. It restricted banks from holding financial assets other than treasury bonds and prohibited a bank holding company from owning other financial companies. But it was repealed in 1999 by the Gramm–Leach–Bliley Act. There is a debate as to whether the weakened controls were a chief cause of the current crises, because investment banks with commercial insured deposits are in better health than those without. But both are in trouble. A major contribution of the 1999 deregulation to the bubble is that it helped expand leverage by creating large actors such as Citibank.

^{xi} An example of a good bubble with beneficial effects: the technology bubble in the US in the late 1990s. The bubble burst in 2000/2001, but the expansion lasted ten years with significant economic and wage growth. It’s worth observing that recent financial market innovations did enhance economic growth and facilitated the purchase of houses for the low-income sector, as well as providing credit for small and medium sized enterprises.

^{xii} See Alan Greenspan, *Age of Turbulence: Adventures in a New World* (New York: Penguin Books, 2008).

^{xiii} For a more detailed analysis and for the issues involved, see Stephan G. Cecchetti, Hans Genberg, John Lipsky and Sushili Wadhvani, *Asset Prices and Central Bank Policy* (Geneva Reports on the World Economy, no. 2, International Center for Monetary and Banking Studies and Center for Economic Policy Research, 2000).

^{xiv} See Benjamin Bernanke, “Non-Monetary Effects of the Financial Crisis in the Propagation of the Great Depression,” *American Economic Review* 73 (June 1983): 257-276; Benjamin Bernanke, V. R. Reinhart, and B.P. Sack, “Monetary Policy Alternatives at the Zero Bound: An Empirical Assessment,” Federal Reserve Board, Washington. D.C. no 48 (2004).

^{xv} Peter Preat, *Financial Times*, March 18.

^{xvi} Ned Phelps, *Wall Street Journal*, March 14, 2008.

^{xvii} For the stock market bubble caused by the technology bubble, see Robert J. Shiller, *Irrational Exuberance* (New York: Random House, 2001)..

^{xviii} For a more detailed analysis of how the use of new financial engineering tools led to the housing bubble and the credit and financial crises, see Bernard and Semmler, “Credit Derivatives in the Housing Market and its Collapse.”

^{xix} For example, the tax holiday may be voluntary; anyone who accepts the holiday can work longer later in life if they need to, to make up for the holiday, in order to reach the Social Security maximum. Such a tax holiday would inject \$80 B per month into the economy.

^{xx} Edward Nell and Mathew Forstater, eds., *Rethinking Functional Finance: Transformational Growth and Full Employment* (Cheltenham Glos, UK: Edward Elgar Publishers: 2002) and L. Randall Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability* (Cheltenham Glos, UK: Edward Elgar Publishers: 1998), present fairly detailed proposals for such programs. Notice that these programs are also anti-inflationary, in that they stabilize the basic low-end wage. When the private sector is booming, the public sector will supply (trained) labor; when the private sector slumps, the public sector will expand. So in a boom labor is supplied, in a slump it is absorbed, thus stabilizing wages. This also eliminates any need for a legally fixed minimum wage, and it likewise makes a lot of social programs redundant, since public sector jobs will be widely available. Both the above works show that the cost of these programs, if they are well-designed and well-run, will be modest.

^{xxi} It is hard to think of a case where a speculative bubble benefited a developing nation; but the “technology bubble” of the late 90s in the US both built the new technology sector and drove growth to high levels. Under some circumstances bubbles can benefit an advanced economy.

^{xxii} This was also true in the case of free trade, but in that case the costs and benefits were more uncertain and more likely to shift and change over time, making any precise calculation very unreliable.

^{xxiii} Thomas Friedman, “Time for (Self) Shock Therapy,” *New York Times*, January 18, 2008.

^{xxiv} For details and justification of the subsequent points, see The Memorandum for a New Financial Architecture and New Regulations, <http://www.newschool.edu/cepa/Financial%20Crisis%202008/MemorandumFinArchNov9082.pdf>. To understand the issues concerning the stimulus package consider an oversimplified but representative calculation: Suppose the full capacity GNP of the US were \$15T, and that at present we might be 15% below that. (Official unemployment is over 8% and another 6% is required to account for part-time work and discouraged workers.) That is a gap of \$2.25T. Call the stimulus package \$.8T and assume the multiplier is 2. (Almost all econometric estimates put the multiplier well below 2.) If all elements of the package truly delivered a full stimulus it would add \$1.6T to the economy, still \$.65T short of the target. Since we know the multiplier is not 2 and that many elements of the package won’t deliver, there is still along way to go.

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