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Time, expectations and financial markets

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Time, Expectations and Financial Markets

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Time, Expectations and Financial Markets

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Abstract

After the breakdown of the Bretton Woods system and the beginning of the neoliberal revolution, financial markets became very unstable. The theoretical background of the neoliberal revolution stands in the tradition of Léon Walras. He was very much impressed by Isaac Newton, used his methodology and wanted to lift economic thinking on the same level as Newton's mechanics. The rational expectation approach and the hypothesis of efficient financial markets follow this methodology. In a Keynesian-Schumpeterian approach, expectations cannot be explained by economic models – as in the case of rational expectations. The economy is not a self-regulating stable system. Development depends on social and political processes which are beyond the scope of narrow economic modelling. The world needs a fundamental re-regulation of asset and financial markets as well as labour markets to turn globalisation into a project with more winners than there are now.

JEL Code: B22, E12, E22

Key Words: Macroeconomics; Post-Keynesian, Financial Markets and the Macroeconomy

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1. Introduction

Over the last decades financial markets have become very unstable. Asset prices (shares, real estate, currencies, and natural resources) followed a rollercoaster with violent ups and downs. Asset markets have a low elasticity of production. On the one hand that means that a high price of an asset does not quickly increase the supply of the asset that would reduce its price. On the other hand, a very low price does not quickly reduce the supply of the asset that could increase its price. The dilemma of asset markets obviously is that demand for assets can change quickly and in an extreme way whereas the supply is relatively fixed. Huge price fluctuations are the result. This paper discusses the reasons for the volatility. Strictly regulated asset markets have not much room for instability. The question is why asset markets became deregulated over the last decades. On the one hand this has to do with vested interests, on the other hand with a wrong theoretical understanding of asset markets.

When asset markets are analysed time and expectations come into the focus. Alfred Marshall (1890: 92) spoke "from the element of *time*, the source of many of the greatest difficulties in economics." And: "But we cannot foresee the future perfectly. The unexpected may happen; and the existing tendencies may be modified before they have had time to accomplish what appears now to be their full and complete work." (Marshall 1890: 289) John Maynard Keynes followed in Marshall's footsteps and developed his vision of time in economics.

A completely different approach was chosen by Léon Walras the great economist who devised the neoclassical General Equilibrium Model. Walras was very impressed by Isaac Newton, used his methodology and wanted to lift economic thinking onto the same level as Newton's mechanics: "Then mathematical economics will rank with the mathematical sciences of astronomy and mechanics; and on that day justice will be done to our work." (Walras 1874: 48)[1] To capture time and future "we need only imagine a commodity (E) consisting of *perpetual net income*." (Walras 1874: 274) This imagined good became part of an intertemporal process of exchange and followed the same logic as timeless barter of goods. It is worthwhile to quote the following summary by Walras (1874: 305f.): "*Capital formation in a market ruled by free competition is an operation by which excess income over consumption can be transformed into such types and quantities of new capital goods proper as are best suited to yield the greatest possible satisfaction of wants both to the individual creators of savings and the whole body of consumers of the services of new capital goods. ...*

[1] Walras was professor in Lausanne, not one of the top universities at the time, and was not as accepted in the scientific community as he would have liked.

Maximum effective utility, on the one hand; uniformity of price, on the other hand … these always constitute the double condition by which the universe of economic interests is automatically governed, just as the universe of astronomical movements is automatically governed by the double condition of gravitation which acts in direct proportion to the masses and in inverse proportion to the square of the distances. … Furthermore, an important truth, which economists have proclaimed over and over again, but have left unproven, is finally established in the face of the denials of socialists, namely, that under certain conditions and within limits the mechanism of free competition is a self-driven and self-regulating mechanism not only for transforming services into products but also for turning savings into capital goods proper."

Alfred Marshall and Léon Walras stand for two visions of economic thinking which were developed even further in the twentieth century. In section two we will elaborate the modern development based on Walras' thinking. It will also become clear that the theoretical background of the neoliberal revolution, which gained speed with the election of Margret Thatcher as Prime Minister in the United Kingdom in 1979 and Ronald Reagan as president of the United States in 1980, stands in the tradition of Léon Walras. Section three is devoted to Keynes' criticism of the neoclassical handling of time. It is also shown that he recommended highly regulated markets especially in the field of money and finance. Chapter four gives a very short sketch about the economic results of the neoliberal revolution. The last chapter draws some conclusions.

2. Time in the neoclassical world

The General Equilibrium Model based on Walras' first approach was further developed by Gerard Debreu, Kenneth Arrow, Frank Hahn and others (Debreu 1959; Arrow/ Hahn 1971). In the modern version, Walras' idea of an imaginative commodity consisting of perpetual net income was given up. Time was now more clearly captured by the assumption of a universal future market. The story goes like this: The market is opened today and will never open again. All future transactions are fixed today. All goods have markets and prices at all future times. Bananas and cars, to give an example, are bought and sold today, tomorrow, in 10 years in 50 years – until the time ends. The vector of relative prices does not allocate all goods today, it allocates all goods at all possible periods of time. The exchange of goods is only allowed to take place when a comprehensive equilibrium is found. In this models the future is completely

fixed by contracts,[2] there is no place for uncertainty, and all economic agents know what will happen in the future.

What is the function of such an unreal model which for ordinary men and women can only be created by lunatics?[3] These models show that extreme assumptions are needed to prove that a welfare maximizing allocation[4] of resources is *possible* in an economy with a great number of households and firms which all follow individual egoistic strategies .It should be mentioned that more than one equilibrium constellation is likely and it is not possible to judge which one is the best one. More importantly, only the static equilibrium points are determined. There is no guarantee that an economic process converges to one of the equilibrium solutions.

If the universe of future markets becomes incomplete, "rather terrible things happen with the theory" (Hahn 1981: 132). Future markets are substituted by expectations. Economic agents must start to develop expectations about future prices and future quantities. According to Frank Hahn (1981) there are two possibilities to handle the problem of incomplete future markets:

There is no good economic model to explain expectations. This implies that expectations are given from outside the economic system. The problem with this approach is that any change in expectations moves the economy to a new equilibrium. A sequence economy is created which jumps from one short-term equilibrium to another. A lot of economic dynamic is created by outside forces, the expectations which cannot be explained. There is no ex-ante given long-term trend of economic development, the long-run is the outcome of the series of short sequences. We will later see that this approach very much fits to the Keynesian paradigm.

We can "invoke" rational expectations. Rational expectations, in a way, transfer the universal future markets in the brain of economic agents. Who is better than John Muth (1961: 316), the father of rational expectations, to give the definition: "I would like to suggest that expectations, since they are informed predictions of future events, are essentially the same as the predictions of the relevant economic theory." We have to savour this. It does mean that expectations disappear as independent variables from economic models as economic agents

[2] Contingent contracts are allowed. However, this does not change the logic of the model.
[3] Arrow was actually awarded the Nobel Prize in economics in 1972, Debreu in 1983 and Hahn in 1987.
[4] The welfare-maximizing solution is Pareto-optimal. This means it is not possible to improve the welfare of even one person without reducing the welfare of other persons.

expect the equilibrium outcome of the economic model. For the model builder, rational expectations are of great help. She can build her models without being disturbed by such nasty problems as time and expectations. To state it simply: Economic models capture fundamentals, economic agents expect fundamentals .

The rational expectation school became influential in the 1970s with the works of Robert Lucas (1972; 1973; 1975), Thomas Sargent and Neil Wallace (1975) and some others and started to dominate lecture rooms. The model was made more complicated without changing its substance. It was argued that there is no perfect foresight in the sense that economic agents directly can predict the future variables. Also model builders can only predict future variables in a probabilistic sense. However, the probabilities which can be used, so the argument, are objective probabilities. On this basis, it can firstly be assumed that the subjective probabilities of all economic agents are identical with the objective probabilities. In this case the subjective-probability distribution of economic actors is identical with the true objective-probability distribution of the economic system. Second, it can also be assumed that some agents have wrong expectations and do not discover the truth. In this case arbitrage processes of informed economic agents who know the truth will lead to an equilibrium which is identical with the equilibrium determined by objective probabilities. This point was already stressed by Milton Friedman (1953) who assumed that speculators would stabilize a system and help to realise the equilibrium given by fundamentals. Especially in financial markets with low arbitrage costs such an assumption is justified. It does not matter which of the above versions is used, expectations of economic agents do not disturb the equilibrium given by the fundamentals of the economic model.

The microeconomic and financial market version of rational expectations is the so called ‘financial-market-efficiency hypothesis’. This leading approach in finance was made popular by Eugene Fama (1970; 1976). Rational investors evaluate the value of an asset, for example a stock, by calculating the net present value of the future cash flows produced by the asset.

The cash flows will be discounted with a risk adjusted discount rate. Let us make an example: The price of the shares of a steel factory is given by calculating all future net cash flows which can be expected from the operation of the steel factory, let us say for the next thirty years. As a discount rate the long-term interest rate for government bonds plus a specific risk premium for the steel factory is used.

As with the rational expectation approach, there are different versions of the efficient-financial-market hypothesis. In the so called ‘strong version’ all investors expect assets according to fundamentals. In the second version not all investors are rational, however, there trades are random and cancel each other out. Finally, it is assumed that some smart arbitrageurs who act rational are sufficient to bring asset prices to fundamentals. Rational arbitrageurs can earn a profit bringing asset prices to fundamental values and will do so (Shleifer 2000: 2ff.)

Objective probabilities obviously cannot be based on future data which do not exist. They must be collected in the past. Indeed, it is assumed that past data (past probabilities, past correlations, past default rates and other past statistical measures) are relevant for future developments. At this point we are back at Newton’s Mechanics: The future is considered to reflect the past and vice versa – otherwise rational expectations are not possible. Rational expectations are based on so called ‘ergodic stochastic processes’ which cannot be persistently different in the future and in the past. Logical time as in Newton`s Mechanics is the basis of such thinking and not historical time in a historical process (Davidson 1991).

Again we can ask why economists built such models which obviously are light-years removed from reality.[5] The overwhelming majority of practitioners in financial markets and/or those in management positions and even laymen would argue that the future cannot be known on the basis of objective probabilities and that the past is not always a good guide for the future. One interpretation is that the rational expectation school, as the General Equilibrium Model, worked out the extreme assumption needed to exclude time and expectations from economic models and prove the existence of a Pareto-optimal equilibrium which maximizes welfare, does not know unemployment or other nasty thinks which are identified with capitalism. The economists developing the General Equilibrium Model after World War II seemed to follow such a methodological approach and sometimes fiercely rejected any shortcut conclusion form their models (see for example Hahn 1981). The rational expectation school and the New Classical model, which developed in its tradition, seem to be beyond such doubts and direct conclusions from these extremely unrealistic models for economic policy. One additional point is worthwhile mentioning. The economists of the General Equilibrium Model were sceptical or at least left it open, whether the market will find one of the equilibria, the rational expectation school simply assumed that markets are always in equilibrium. They really

[5] Lucas received the Nobel Prize for rational expectations in 1995, Friedman already in 1976, not for rational expectations, however.

believed in the market as a self-regulating apparatus which smoothly coordinates the egoistic and uncoordinated behaviour of millions of households and firms.

The rational expectation school tells us that monetary and fiscal policy is not needed as free markets lead to Pareto-optimal equilibria. The implication is that money or monetary policy (including fiscal policy) is not just neutral in the long-run, as Friedman (1968) argued; it is also neutral in the short-run. Monetary policy simply cannot systematically influence real variables.

However, there is one more point which is important in our context. The rational expectation school and its extension, the efficient-market hypotheses, make us believe that the future is calculable, financial markets are driven by fundamentals and are inherently stable. In this world of objective probabilities, the future can be calculated. Reducing the risk of portfolios becomes a mathematical problem. Mixing assets with uncorrelated price movements or credits with uncorrelated default rates makes a portfolio saver. Mixing different assets to "produce" complex financial products would not only create high returns, it would also make the world more calculable and safer. Given the amount of past data available and modern computer technology, the creation of complex financial products became possible. However, it is the expertise of highly specialized mathematicians and other quantitative oriented experts.

Not only investment bankers mixing financial products believed in rational expectations and efficient financial markets. Rating agencies which have the function to rate financial products used the same approach.[6] Accounting rules were changed in such a way as to immediately adjust the price of assets to actual market developments. Since the early 1990s mark-to-market or fair value accounting has been a part of US General Accepted Accounting Principles (GAAP). Accounting standards were changed to meet demands by investors for relevant and timely financial statements. Mark-to-market accounting assumes that asset prices always reflect fundamentals and accounting has the function to report fundamentals. In the traditional accounting standards assets were booked according to purchasing prices or even lower if the market price fell below the purchasing price. Lastly, financial supervisors were infected by the new fashionable beliefs. The so called 'Amendment to the Basel Accord' in 1996 marked the paradigmatic change in banking supervision. Before the Amendment banks had to follow a so-called 'standard approach' and were forced to keep a certain fixed

[6] In addition rating agencies suffered from conflict of interests. They were not only paid by the financial institutions and firms they rated, they also worked as their advisors, for example.

percentage of their credit as equity. After the Amendment, which came as an important part of the later established Basel II rules, banks were allowed to use individual quantitative risk models to calculate their equity holdings. Again, the models were based on past data.

Mark-to-market accounting and individual quantitative risk models by banks led to pro-cyclical effects and stimulated asset price inflations and deflations. They also led to reduced equity holdings of financial systems to dangerously low levels (Hellwig 2008: 43f.). Furthermore, most members of the economic and political elite believed in efficient markets. A good example is Alan Greenspan (2002), the former president of the US Federal Reserve, who argued: "No one can deny that fully informed market participants will generate the most efficient pricing of resources and the most efficient allocation of capital." The development of a shadow-banking system inside developed countries and in offshore centres with no or a low level of regulation was allowed or even seen as a way to overcome old-fashioned regulations.

3. Time in the Keynesian world

Knight (1921) distinguished between risk and uncertainty. Risk is based on probabilities. Uncertainty implies that the probability apparatus does not work. Not all future events are known, it is not possible to give known events specific probabilities and the probability of all events may not add up to one. Keynes (1921) wrote a whole book – a "Treatise on Probability" –, however, he argued that probability models would not be suitable to understand capitalist economies. "We are merely reminding ourselves that human decisions affecting the future, whether personal or politic or economic, cannot depend on strict mathematical expectations, since the basis for making such calculations does not exist." Keynes 1936: 162f.) About many economic matters "there is no scientific basis on which to form any calculable probability whatever. We simply do not know." (Keynes 1997: 214)

How can we explain expectations if uncertainty exists and future events are largely unknown? Let us again quote Keynes (1936: 161): "Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as a result of animal spirits – of a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities." Joseph Schumpeter (1911) used "entrepreneurship" in exactly the same way to explain human behaviour. In a Keynesian-Schumpeterian approach expectations cannot be explained by economic models – as in the case of rational expectations. They depend on social and political processes which are beyond the scope of narrow economic modelling.

Uncertainty in a market economy covers not only the uncertainties which confront all societies, like the uncertainty about a bad harvest or an epidemic. Uncertainty is created by markets themselves.

Going back to Frank Hahn (see above), it becomes clear that expectations in the Keynesian paradigm are given from outside the economic system. Of course economists can tell a lot of stories about expectations, but these stories depend on time and place and are historical stories and reflect historical time. Exogenous expectations are the formal link between the economy and the rest of society. Economists need the help of sociologists, political scientists or psychologists to understand the world and say something about exogenous expectations. Just one example in which direction to go is Behavioural Finance, which produced useful insights how financial markets work (cp. Shleifer 2000; Kahneman/Slovic/Tversky 1982).

There is no doubt that many decision makers have a long-term strategy – for example a manager in a steel factory who has to decide whether to invest in a new steel plant or not. Our steel manager has a strenuous task to fulfil. To calculate the future net cash flows she has to have certain expectations about the quantity and price of steel in 5, 10 or 30 years, cost developments of energy and wages, she has to think about exchange rate movements if steel is imported or foreign competitors exist, and she has to think about possible new technologies which make existing plants obsolete, etc. And she also has to decide the risk premium to find the interest rate to discount the cash flows. Investment decisions are “critical” decisions, as George Shakle (1958) called it, and a manager may only have to decide one or two times in her life to invest in a new steel plant or not. Analysis of past investments will reveal that conditions have changed and not much can be learned for the future.

We must expect that different steel managers, all of whom are well informed and searching hard for fundamentals, will find *different* fundamentals. There is no basis to assume that, as in the case of rational expectations and efficient markets, even well informed steel managers will expect the same. There also will be no arbitrage mechanism to bring the price of steel plants to their fundamental value or better one of their fundamental values. For share holders who should, according to neoclassical thinking, do the same calculations as steel managers to find the “fair price” of steel-company shares, the task is even harder. We cannot assume that share holders usually have knowledge comparable to that of steel managers.

If economic agents believe in different fundamentals, mere chance may decide which fundamental will become dominant. This also implies that development is path-dependent. After Hurricane Katrina destroyed large parts of New Orleans in 2005, it was unclear whether New Orleans would be rebuilt or not. If a large part of the population believes that many people will rebuild their homes in New Orleans, it will indeed be rebuilt. If on the other hand many people believe that a large number of people would not go back to New Orleans, it will not be rebuilt as nobody likes to live without neighbours and shops (Akerlof/Shiller 2008: 12). In such cases we can speak about a self-fulfilling prophecy, an expression coined by the sociologist Robert Merton (1949). The economy is full of such phenomenon. If everybody believes, to give another example, that share prices go up share prices will go up.

Let us approach the problem of fundamentals from another angle. Economic models usually assume that there are fundamentals, economic agents search for the fundamentals and asset prices adjust accordingly. If fundamentals change then the market will realise it and a new equilibrium price will result. We can even assume that the market process needs time to find the equilibrium and fundamentals change during the process of adjustment. In this case the market is always lagging behind the moving fundamental – like the birds flying behind a fishing boat change direction with the boat. This way of thinking is behind Marshall's (1890) quotation at the beginning of the paper. In Marshall's tradition, Keynes (1936: 293) speaks about a shifting equilibrium. However, this way of thinking still is too simple. Along historical time, the actions of millions of people change the world. The future is permanently created and cannot be discovered as something given. As soon as agents start to act on the basis of certain expectations, even based in the long-term, their action will endogenously change fundamentals. George Soros (2008: 58) makes this point: "Each case involves a two-way, reflexive connection between market valuations and the so-called fundamentals that sets up some kind of short circuit between them whereby valuations affect the fundamentals that they are supposed to reflect." In traditional economic models this problem is solved by assuming that economic agents are only allowed to act when the equilibrium is realised. It shows the methodological clearness of the New Classical model that it assumes that all markets are always in equilibrium. However, this assumption is as unrealistic as the assumption that economic agents automatically believe in the model of the model builder and expect the equilibrium outcome of a model.

So far we have discussed long-term expectations. But many agents especially in asset markets act on the basis of short-term expectations. For example, if in the short term increasing share

prices or real estate prices are expected it becomes profitable to buy shares and real estate now and to sell them after prices have increased – even if it is expected that in the long run share and real estate prices will fall. Speculators are not searching or do not care about fundamentals, they rather try to find out the expectations of other players. Speculation is like a "beauty contest" in which the winner does not choose his or her preferred person but the person who is chosen by most others as the most beautiful. Expectations in this case depend on expectations. All types of chaotic price movements can result from such behaviour (Keynes 1936: chapter 12; Akerlof/ Shiller 2009: chapter 11).

Other actors use chart analyses. This means they implicitly base their trading on adaptive expectations which simply assume that a past trend will also continue in the future. Last but not least there is computer-based trading. In this case, shares or currencies are automatically bought and sold after a certain sequence of price changes. In all of these cases, fundamentals play no role.[7]

Asset markets tend to feedback mechanisms and cumulative processes. Long-term expectations can change in a cumulative way. Let us assume real estate prices increase because there is a shortage of housing. Some economic agents will start to buy real estate. When real estate prices increase over time more and more agents may change their long-term expectations and expect increasing real estate prices for a long time. Overoptimistic expectations spread in society and drive real estate prices higher and higher. Economists and journalists during such a development typically justify price movements by stories about "changing fundamentals" or "new areas" (Shiller 2008). Higher asset prices increase the value of collaterals and stimulate banks to grant additional credit which increases the demand for assets and their prices. As far as financial institutions, they keep real estate, shares etc. and their equity increases and as this also stimulates credit supply. At the same time higher asset prices lead to a positive wealth effect which stimulates debtors to take more credit. Granting credit involves no production costs. Credit can be created "ad hoc" (out of nothing, as Joseph Schumpeter (1911) called it in the German original). The consequence is that potentially the banking system can create unlimited credit. If expectations are positive – and it is very likely that banks follow the same waves of optimism and pessimism as their debtors – an asset price

[7] There should be no surprise that Tobin`s q, which gives the relation between the share-price value and costs of steel factories, does poor in explaining investment. Managers and share holders may have very different expectations. The manager is forced to have at least a relatively long-term horizon, share holders not.

bubble leads to credit expansion and credit expansion reinforces asset price increases.[8] Asset price inflations can be exclusively based on long-term expectations leading to irrational exuberance and waves of pessimism. If we add speculative and other short-term oriented activities, it should be no surprise that asset markets tend to be marked by chaotic developments.

Asset price deflations are the irrevocable result of exuberant asset price inflations. The destructive power of a fall in asset prices depends on the leverage which is build up in the boom phase. An asset price deflation reduces equity of firms, banks and private households and destroys collateral. Financial institutions reduce credits as the result of pessimistic expectations and/or a loss in equity. Typically, a liquidity and insolvency crisis spreads. Distress selling of assets leads to further asset price deflation, a further reduction of equity and collateral, etc. Bankruptcies of firms and private households will lead to additional non-performing loans in the financial system.[9] Misled regulations like Basel II and fair value accounting can add to these cumulative processes. The subprime crisis which broke out in 2007 is just one example how disastrous busts of asset bubbles can become.

We can speak about a "conventional judgement" (Keynes 1937: 214)[10] which is exogenously given for the economy. "In particular, being based on so flimsy foundation, it is subject to sudden and violent changes." (Keynes 1937: 214) Two constellations are possible. If the economy is embedded in stabilising institutions and regulations, conventional judgment can become relatively stable. If the economy is deregulated and becomes unstable, conventional judgment has no anchor and can change suddenly and violently. The two constellations reproduce and intensify themselves. A deregulated system, for example, creates a high level of uncertainty which leads to frequent sudden and violent changes in conventional judgment and a further increase in the level of uncertainty.

Great Depressions like the one in the 1930s develop if an asset price deflation leads to a strong goods market deflation. Any cyclical downturn is combined with a lack of aggregate goods market demand and a tendency of demand deflation. However, a strong deflationary process in the goods market is only triggered when nominal wages start to fall. In such a case a deflationary wage-price spiral develops (Keynes 1930; Herr 2009). Goods market deflations

[8] For the real estate market cp. Goodhart/Hofmann (2007).
[9] This is the story told by Fisher (1933), Minsky (1975), Kindleberger (1996) or Stiglitz/Greenwald (2003).
[10] Keynes (1936: 148) also called it a "state of confidence".

are even more dangerous than asset price deflation as they increase the real debt burden of *all* debtors (indebted in domestic money). The real interest rate is high or increases even the central bank sets its nominal refinancing interest rate at zero.

4. The Neoliberal revolution and its result

In the 1970s the economic model which was established under the New Deal after the Great Depression in the 1930s fell into crisis. In many countries, the 1970s were characterized by high inflation rates triggered by oil-price shocks and inflationary wage increases. Governments, social movements, unions and other groups which were social democratic or socialist oriented during that period were not able to stabilise the macroeconomic situation and reform the economy in their interest. Much too high nominal wage increases and the resulting high inflation discredited governments and social movements and helped conservative governments to become popular. The final collapse of the Bretton Woods system in 1973 was the first big step in the destruction of the model of the so called “Golden Capitalist Age” (Marglin/Schor 1992). Friedman (1953) had already praised flexible exchange rates as a wonderful mechanism to balance current accounts and to allow all countries to pursue a domestic-oriented monetary policy. In an influential paper Harry Johnson (1972) argued in the same direction. After some minor deregulations in the domestic financial system in the 1970s the conservative revolution which started with Margret Thatcher in the United Kingdom and Ronald Reagan in the United States and which spilled over to almost all Western countries started a broad deregulation and neoliberal globalisation project. The core of the project was the far-reaching deregulation of domestic and international financial markets and the labour market. The rational expectation school and the hypothesis of efficient financial markets created the intellectual background and foundation of the neoliberal revolution. Conservative and market radical think thanks were able to advise governments (Harvey 2005). The system created became the most deregulated one which ever existed. We should keep in mind that the first globalisation wave in capitalism, which took place before World War I, was characterized by fixed exchange rates and relatively high trade restrictions as well as the build-up of basic social security systems.

The deregulation of markets which began in the 1970s created predictable results: All asset markets became volatile and added to the instability of the market system. A deregulated chaotic system with a very high level of uncertainty and instability was established. Let us have a quick look at the empirical development.

Stock markets showed enormous bubbles (see Figure 1). The internet bubble in the 1990s was the first extreme stock market bubble after World War II. It imploded in the early 2000s and made way for a second huge bubble after 2003 which came to an end in 2007. Japan deregulated financial markets in the second half of the 1980s and promptly realised a stock market boom which came to its end in 1990. In 1987 there was a stock market crash in the United States and other countries. At that time the crash was considered to be big, however, in retrospect it seems to be negligibly small. Fundamentals cannot explain these bubbles in a plausible way (Shiller 2008).

Figure 2 shows a perfect real estate bubble in Japan. Falling real estate and share prices in the early 1990s led to an explosion of non-performing loans in Japan and a deep and long-lasting economic crisis. After around five years of stagnation, the nominal wage anchor in Japan broke and falling nominal wages led to moderate deflation. Until today, Japan has not been able to recover from the asset price bubbles in the second half of the 1980s (Herr/Kazandziska 2010). The real estate price bubble in the United States for private homes which triggered the subprime crisis is shown in Figure 3. In most countries, the world real estate bubbles developed in the 2000s and imploded after 2007, from Spain to the United Kingdom to Australia. Also developing countries suffered from real estate bubbles.

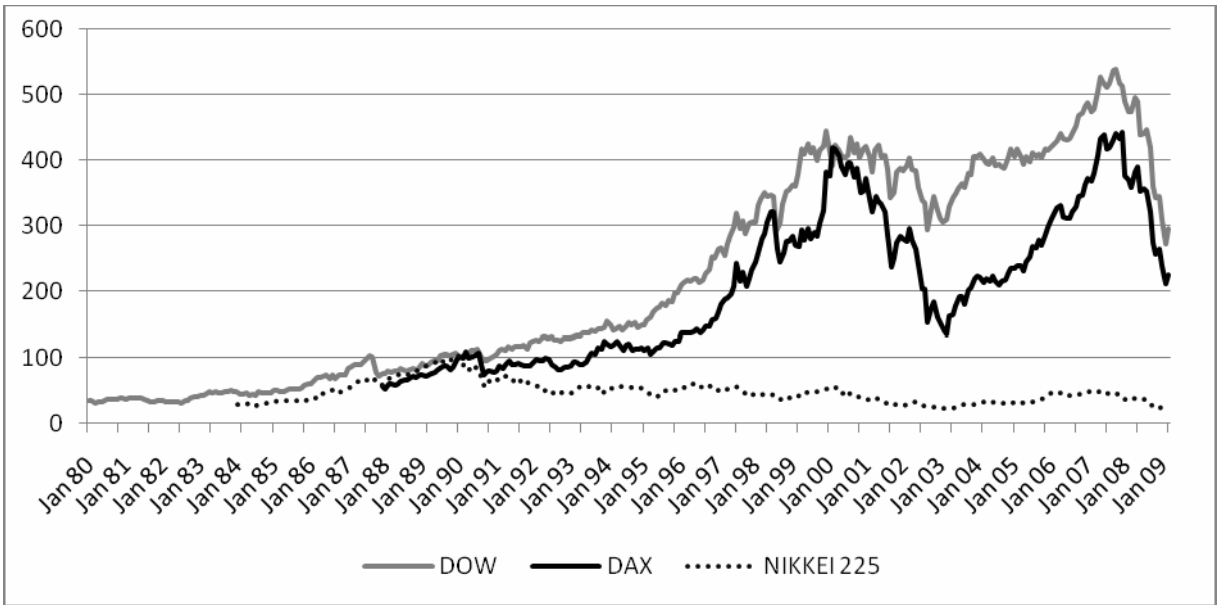
After the breakdown of the Bretton Woods system, the international exchange rate system became chaotic with unstable capital flows and volatile exchange rates. Double digit exchange rate movements within short periods of time became frequent (see Figure 4). The world economy has suffered from the lack of a stable international reserve currency because the US-dollar became very unstable as well as the Euro. Current account imbalances are driven by capital flows. As capitals flows became bigger and bigger, current account imbalances also increased. US capital imports in the 1980s led to a strongly appreciating US-dollar and at the same time a huge deficit in the US current account. After 1985 the US-dollar collapsed and the current account deficit disappeared. In the 1990s and 2000s, an even bigger US current account deficit developed (see Figure 5). Everything has been done to explain exchange rate movements, at least in retrospect. Dornbusch und Frankel (1988: 67) had to accept that most of the movement in econometric analyses is “explained” by the error term. There is not the faintest tendencies that flexible exchange rate would balance current accounts. Also the idea by Milton Friedman and Harry Johnson that flexible exchange rates would substantially increase the room for domestic oriented monetary policy is in general not true.

Capital flows between developed and developing countries are as unstable as within the group of developed countries. They follow the logic of boom-bust cycles (Williamson 2005; Herr/ Priewe (2005). Figure 6 shows three quantitatively increasing boom-bust cycles after the deregulation of capital flows. The first was in the 1970s and came to an end when Mexico declared bankruptcy in 1982. The next boom phase started in the early 1990s and ended with a sequence of crises from Asia to Latin America. In the 2000s a new and even bigger wave of capital flows to developing countries started and collapsed during the subprime crisis. The boom phase of the cycle takes place on the basis of high confidence of foreign and domestic economic agents in economic development in the developing country. Typically, high capital imports lead to a period of stable exchange rates, increasing current account deficits, high domestic credit expansion, high GDP growth and domestic asset price inflation in the stock and real estate market. Fragility increases as the developing countries suffer from increasing maturity and currency mismatch. Currency crises in a fragile constellation can be triggered by many factors: political shocks, world market shocks, restrictive monetary policy, contagion effects, etc. In all currency crises, investors want to secure their wealth and prefer to keep it in high-quality currencies like the US-dollar or the Euro. During a crisis, foreign creditors stop giving credit and reject the rollover of old stocks of debt. The result is a collapse of the exchange rate, an increase of the real debt burden in foreign currency (a so-called twin-crisis) and a domestic asset price deflation (Kaminsky/ Reinhart 1999). The list of disastrous twin-crises is long: Latin America in the 1980s (the “lost decade”, Dornbusch 1990), Mexico 1994, the Asian crisis 1997, Russia 1998, Argentina 2001, the Baltic States 2008 and many others.[11]

Last not least Figure 7 reveals that the oil price, standing here for all natural resources including food, also became very unstable. While the two oil price hikes in the 1970s can be explained partly by political actions of OPEC, it seems obvious that the price hike after 2003 is based on misled long-term expectations and speculation (Akerlof/ Shiller 2008).

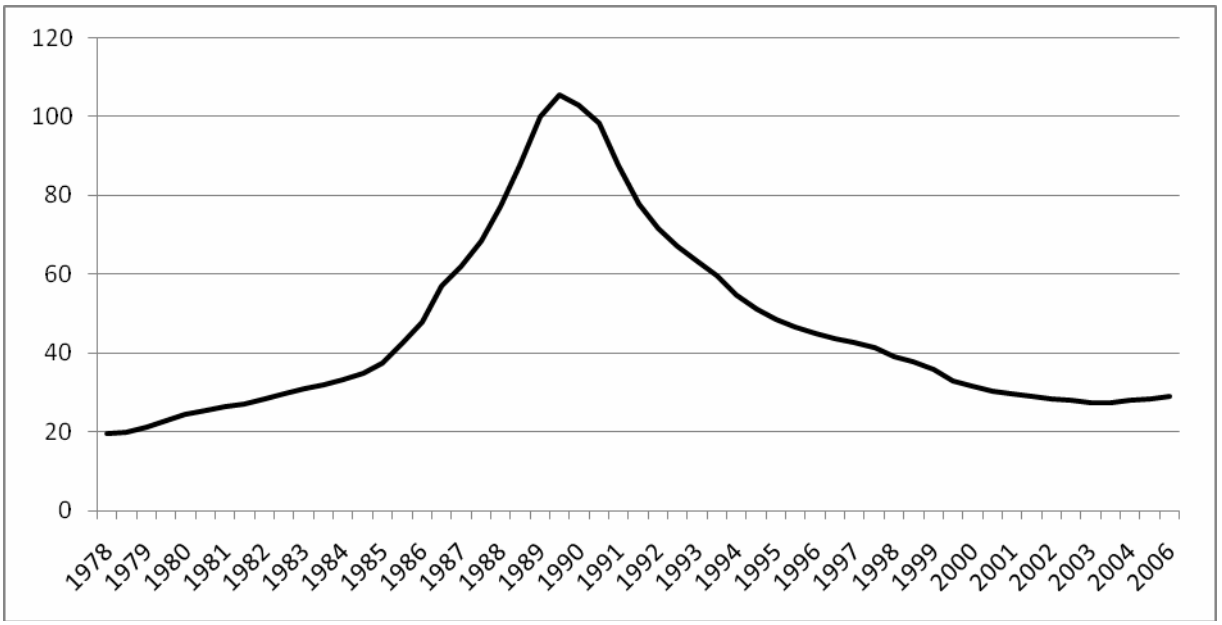
[11] It is no surprise that there is no positive correlation between capital account liberalisation and economic growth in developing countries (Stiglitz 2004).

Figure 1: Share prices in the Unites States, Germany and Japan



Source: Yahoo Finance 2009

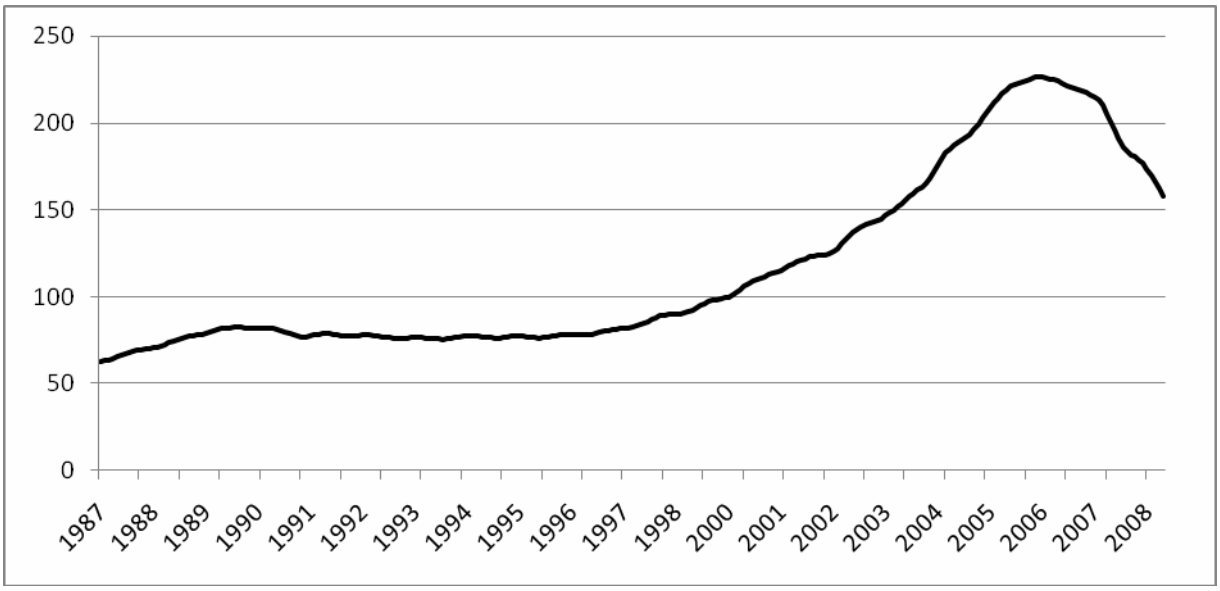
Figure 2: Real estate prices in Japan



The index covers the following cities: Tokyo, Yokohama, Nagoya, Kyoto, Osaka and Kobe

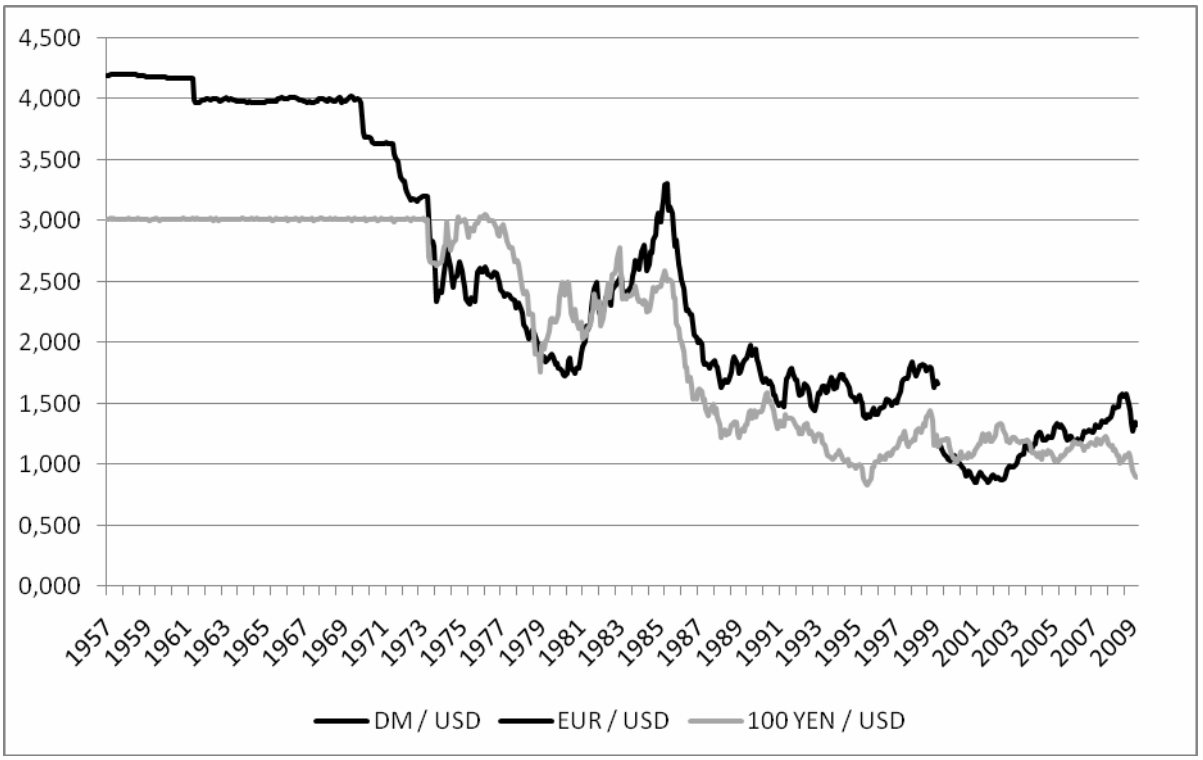
Source: Japan Real Estate Institute

Figure 3: Real estate prices for private homes in the USA (January 2000 = 100)



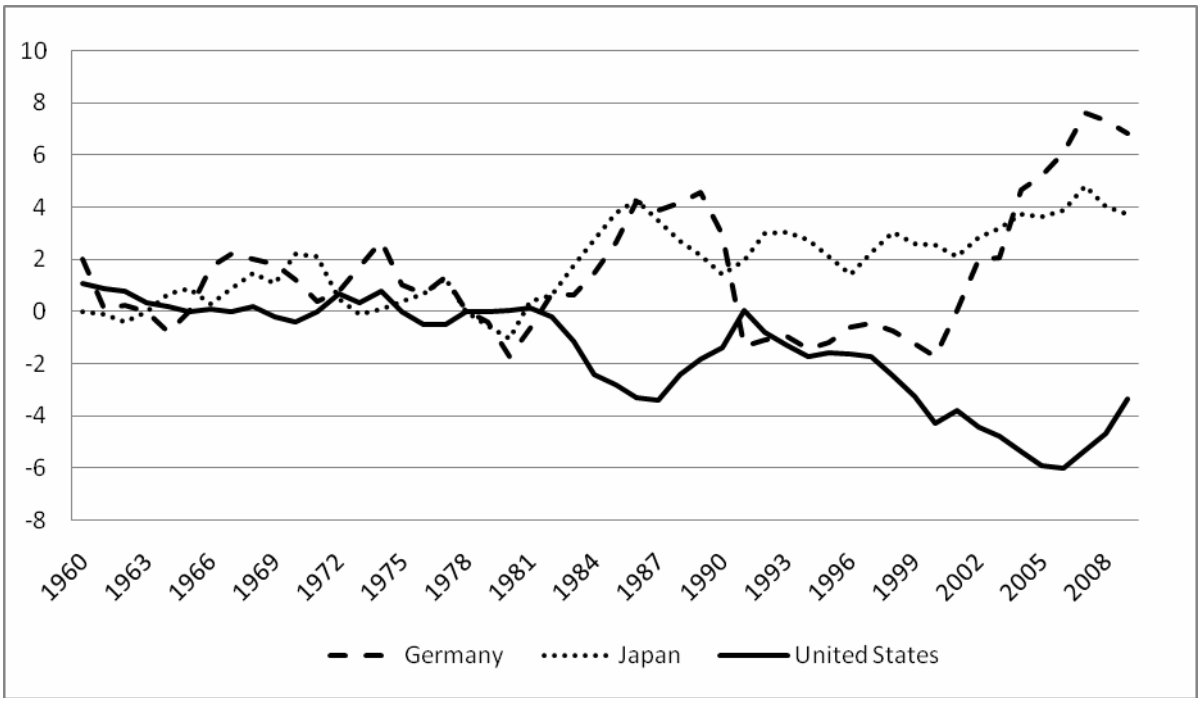
Source: S&P/Case- Shiller Home Price Indices (Composite-10 CSXR)

Figure 4: Nominal exchange rates between yen, D-mark (euro)



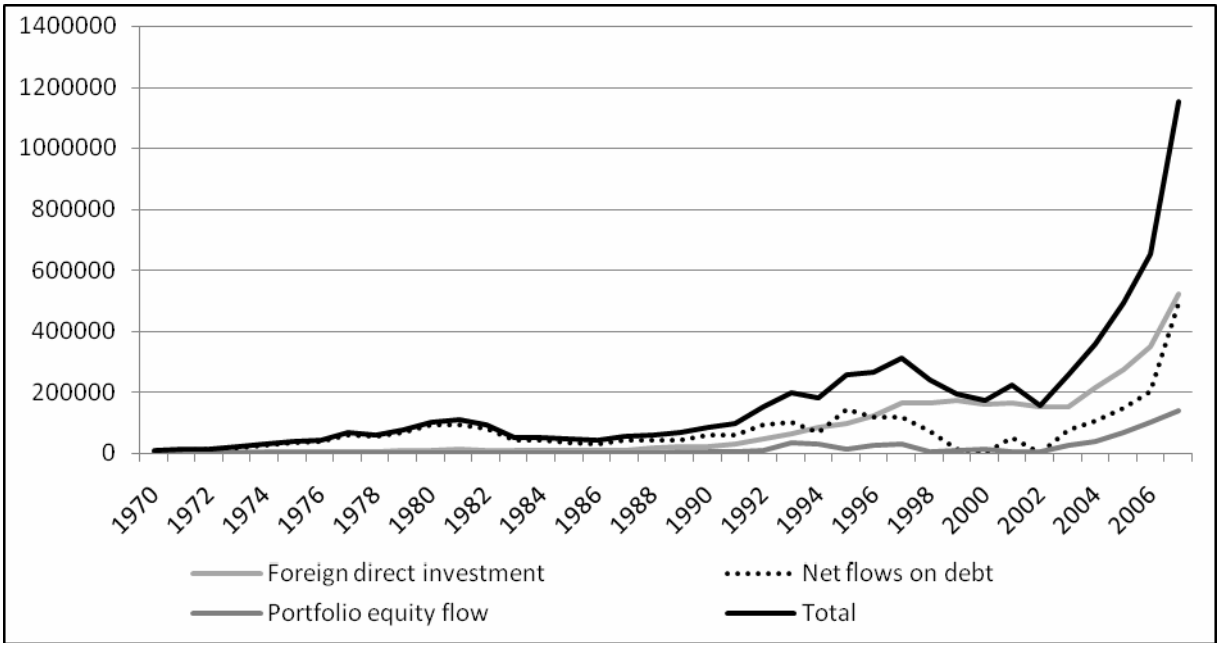
Source: Federal Reserve Bank of St. Louis; increase means depreciation of yen and D-Mark

Figure 5: Current account imbalances in Germany, United States and Japan in percent of GDP



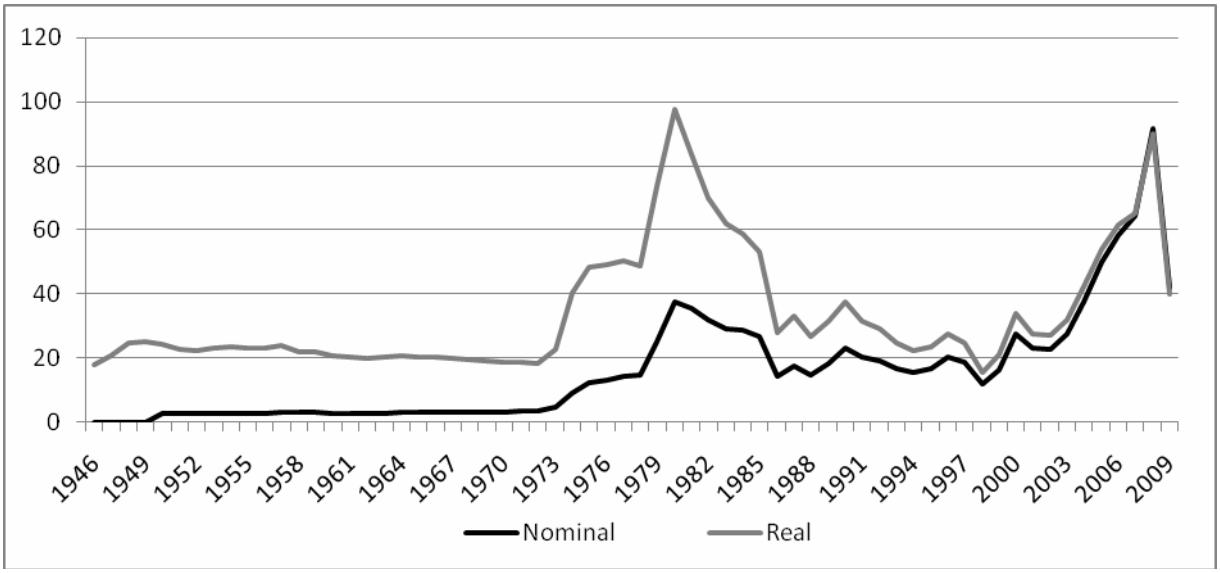
Source: World Economic Outlook 2008

Figure 6: Total net capital flows of all developing countries in million US dollars



Source: own calculation with data provided in Williamson (2005), p. 40, UNCTAD World Investment Report 2008

Figure 7: Oil price development in US-dollar



Real price adjusted by US-inflation rate. Source: InflationData.com (Financial Trend Forecaster)

5. The world we live in

The deregulation of financial and labour markets, which gathered momentum in recent decades, led to a weakening of the institutions that had previously stabilised economic development. Unregulated market forces, which lead to unstable and partially self-reinforcing processes, have gained ground. It becomes clear that asset markets have no stable price anchor. Asset prices are driven by unstable expectations, speculation and uncontrolled credit expansion. Taken together, the deregulation of asset and labour markets created a rather bitter cocktail. The following areas interact and explain the bitterness.

The Bretton Woods System which delivered a stable monetary umbrella over the market-dominated world at that time was destroyed. Exchange rate movements between the world's leading currencies are now volatile and create permanent shocks for assets, goods and labour markets. Huge capital flows have led to unsustainable current account imbalances unknown in the 1950s and 1960s. There is extreme uncertainty about the future international role of the US dollar, the size of the future US current account deficit and exchange-rate movements.

Along with the deregulation of international financial markets, domestic financial markets were liberalised. There is a long list of changes which include: The increasing importance of securitisation and futures markets, structural changes like the dissolution of the segmented banking system in the USA, the increasing importance of new players (especially investment

funds, hedge funds, etc.), technical progress and new financial products, systematic transfer of financial activities in non-regulated areas inside and outside the countries (the development of a shadow-banking system), short-term and risk orientation of agents, procyclical regulations like Basel II and fair value accounting, increasing importance of speculation, and a change in corporate governance. Stock markets and real estate markets became characterised by enormous asset price inflations and asset price deflations. Real estate bubbles are even more dangerous than stock market bubbles as much more credit is involved in real estate markets. Asset price bubbles are fuelled by credit expansion and international capital flows. The disastrous consequences of imploding asset price bubbles are exemplified in the subprime crisis which started to grip the world in 2007.

Capital flows were also deregulated between developed countries and many of the developing countries. Boom-bust cycles with high capital inflows in developing countries and sudden outflows and twin-crises dominate the scene. The long list of twin crises indicates the enormous economic and social costs of this development. Boom-bust cycles can develop parallel to upswings and downturns in developed countries. The last boom-bust cycle which surfaced in 2003 definitely follows this logic. The dangerous situation for the world economy is that slowdowns of GDP growth in developed countries go along with capital flowing back from developing countries into the safe haven of the developed world. Developing countries are hit by reduced export revenues and, at the same time, by capital outflows.

Markets for natural resources have, as argued above, also no anchor and are driven by volatile long-term expectations and speculation. They create shocks for countries which export natural resources and create price level, real income and demand shocks for the entire world economy.

The creeping erosion of the nominal wage anchor in many Western countries as a result of deregulations in the labour markets, the weakening of trade unions and the dominance of neoclassical thinking brought back deflation (in Japan in the 1990s) which was thought to be defeated after the 1930s. Germany in the 2000s also was close to a deflationary development (Hein/Schulten/Truger 2004). The economic slowdown after the subprime crisis also has the potential of producing a wage deflation. The instability potentials of deregulation of financial and labour markets reinforce each other.

Deregulation of labour markets and shocks from the world market have led to low-wage sectors in nearly all countries in the world. Distribution within the working class has become much more unequal. At the same time the financial system has absorbed higher parts of income creation, reduced the wage share and added substantially to the increasingly unequal income distribution. Changes in the corporate government system and the switch from the stakeholder system to the shareholder-value system have allowed the income of management to explode. In the 1950s and 1960s, demand was driven by the purchasing power of workers, but today demand is driven by the much more unstable and probably insufficient demand of the rich and super-rich. In many countries, demand could for some time only be stabilised by excessive consumer credits and the credit granted to the real estate sector . With the subprime crisis this came to an end.

6. … and what can be done

The globalisation and deregulation project which started in the 1970s has failed; a new area of development is needed. Economic thinking has to go back to economists like John Maynard Keynes (1930, 1936) and Karl Polanyi (1911), who argued that only a capitalistic system, which is embedded in institutions and regulations, is acceptable and can survive. The idea of markets as universally self-regulated systems is based on ideology, and it is misleading and dangerous.

The world needs a fundamental re-regulation of asset and financial markets as well as labour markets to make globalisation a project with more winners than there are now. Although ecological problems are not the issue under discussion here, it is clear that without far-reaching internationally coordinated governmental interventions, an environmental disaster is unavoidable. One key area for reform is a (re)regulation of national and international financial markets. Reforms should include, for example, the prevention of asset price inflations, the control of financial products, higher equity holding of financial institutions, banking supervision beyond Basel II, the supervision of all financial institutions (including investment banks and hedge funds), the reduction of speculation in all asset markets, a reform of the corporate governance system and the dissolution of offshore-centres, etc. International capital flows, exchange rate movements and current account imbalances must be controlled and stabilised as well. A new kind of Bretton Woods system is desirable.

Labour markets are also in need of (re-)regulation. In the neoliberal economic and political debate, there is a consensus about labour market flexibility being a good way to solve the

problems of unemployment and globalisation. The tragedy is that all of the created flexibility in labour markets added to instability, inequality and uncertainty. The role of nominal wages as a stable nominal anchor for the price level has to be strengthened again. Government policies are needed to support union policies especially in countries and industries where unions are weak. Minimum wages are an important instrument for preventing deflationary development and limiting wage spreads.[12]

[12] For details see Dullien/Herr/Kellermann (2009).

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