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Abstract

The financial crisis has brought with it an economic recessive which is more severe and widespread than any decline in production for the past 50 years. In the USA and Europe the decline in production over the entire economy was however much less than during the Great Depression of the thirties. Only in manufacturing has the decline in some quarters of 2008/09 been similarly sharp. This time, however, the economic policy makers reacted differently. The high income levels at the start of the crisis and the social systems in place were able to cushion the fall. The roots of the crisis are not only to be found in the financial sector but also in macro economic imbalances, in regulation failures and insufficient policy coordination. Previous experience shows that the length of the crisis will be different for the financial markets, for the housing sector, for production and for employment, and that recovery could be slow, bumpy and fragile. Different approaches of economic policy are being systematically compared and we already discuss how the crisis can actually be turned into an opportunity. One even dares to suggest that some of the elements of the European Model (long-term orientation, stakeholder model) could serve as an example to the world, even if the crisis management in Europe is not without fault, and despite the fact that the USA and China are reacting more decisively with their economic policies. It is necessary to coordinate European policy more closely internally as well as with those of the USA and with the dynamic economies of neighbouring countries and Asia in order to avoid further crises, and proactively to tackle worldwide problems such as climate change, and raw materials and food shortages.

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Keywords: financial crisis, business cycle, stabilisation policy, resilience

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1. Introduction

The international economy finds itself in its deepest crisis since the Great Depression of the 1930's. The impact of declining stock prices, world trade and output of manufacturing on the total economic output and the labour market has until now been comparatively much less pronounced than in the Great Depression of the thirties of the last century. The income level and living standards were at a much higher level at the beginning of this crisis. Economic policy considerably contributed to softening the impact of the crisis. However it still has work to be done and must not reduce the stimulus packages (*Romer*, 2009). The question about the length of the crisis cannot be answered with any certainty, even though there is empirical evidence - although not completely comparable - from previous crises. The crisis will affect financial markets, the real economy and the labour market for differing lengths of time. The timing and the rate of any recovery also remains an open question, as does the structural changes that will and should ensue. The "post-crisis world" does, however, need to be discussed now as this should have an impact on the measures chosen to combat the crisis.

In section 2 we discuss the trigger of the crisis as well as its deeper roots. A collapse in one segment of the American property market sent several shock waves through the whole financial market and the real economy reaching all regions in the world. The pace and the synchronization (with which it spread across all branches and regions was particularly surprising given the fact that the world economy is now multi pillar, and given the differences in the economic systems and problems across the world[1]. The small "trigger" and the rapid spread of the crisis demonstrate that we are not dealing with a minor "accident" but rather a deep crisis which shows up several deeper systemic problems. It is difficult to judge if the reaction of economic policy is sufficient and how long the crisis will last. Measures to increase the resilience of economies to stocks go beyond the scope of this paper (see *Aiginger*, 2009).

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[1] Position in the business cycle, trade deficit/surplus, income level, shortage of raw materials/resources, budgetary situation was very different depending on the country and the region. Globalization, which did have the effect of leveling out incomes between countries over the past few years (cf. catching up of China, India and Eastern Europe), now, due to synchronization, had the negative effect of increasing synchronization of the upturn.

In Section 3 we analyse empirical studies and there is a short comparison of the income level at the start of the crisis and the current losses in income and share values to date. As opposed to most previous crises economic policy generally reacted correctly at a national, regional and international level. However, as we see in Section 4 the strategic content of the reaction, its speed and intensity could have been greater, especially in the EU. Discussions about the dynamics of the economy and the long term positive or negative social changes after the crisis are mostly speculative. But it is important to initiate these discussions.

The fire fighting measures used did not solve many underlying micro- and macro-economic problems. In Section 5 prospects for growth and the focus of economic policy after the crisis are discussed. The final section is a summary.

2. Causes, Developments and Transmission to the Real Economy

The small trigger

The ostensible cause – indeed the actual trigger – was the lax provision of credit in the US property market (in the subprime segment). This caused a boom in the market for privately owned homes. Due to the fact that the US economy made a speedy recovery from the Dot.Com crisis at the beginning of this century and had grown fast in the nineties, house and property prices have increased steadily over the past 15 years. As house and property prices raised so did the value of the collateral security). Increasing property and share prices in turn increased consumption and employment and a cumulative process was set in motion.

Cheap loans to persons whose credit worthiness and income would under normal circumstances not be considered stable or high enough for a loan was also politically accepted. The desire was that every American, including immigrants, should be able to get their own home. The loans were also accepted because at first the interest rates were low and the repayments were only due, or would only increase, at a later date[2]. The risk for the banks was reduced by bundling the loans together, separating them according to classes of risk and then securitising and selling them on ("originate and distribute"). The risk was then partly passed on furthermore to "conduits" or Special Purpose Vehicles (which were not consolidated with the originator, though they had to give guarantees) and national and international banks including some in Switzerland and Germany. As a result of passing on the papers the originator of the risk, e.g. the bank, (who had to know the risk) did not need to put aside any reserves (to cover their risks). The sellers mandated listed rating agencies to rate the securitised loans. As a result of the good ratings (AAA) of the securitised loans the buyers (of

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[2] What was also partly underlying the speculation was that as soon as higher repayments were due, the loan was repaid and could be replaced with a cheaper loan. At the end of the day the risk of a loan to build a house in the USA was lower. If the value of the house became less than the outstanding loan the owner could just leave the house. In some states the home owner could then walk away debt free (as opposed to Europe where the debt is attached to the property and not the person).

the risk) only needed to put aside a very small proportion of equity (as security to cover their risk)[3]. Hence, the investors all over the world were able to buy these in great volumes.

The bubble burst when the interest rates started increasing as a result of inflation, the market for houses was saturated and when monetary policy became more restrictive. Prices collapsed and with them the collateral for the loans. Many borrowers had also entered the phase of higher repayments and interest rates which they could no longer replace or service with cheaper loans. Houses and properties had to be left or could no longer be built and other borrowers had to reduce their consumption and lost their credit basis/rating.

Banks had loans that they could not call in and which were not backed by any or sufficient equity capital. The problem for the banks increased because empty houses lose their value very quickly. Now even tranches of the securitisation that had been considered relatively safe made losses. Banks were highly leveraged, tried to restore their equity ratio by selling assets, but this was either not possible or at low and declining prices.

The long term causes

The turbulence in one segment of the American market[4] would not in itself have been sufficient to cause such a worldwide crisis. What was surprising was the prevalence of the securitised property loans in the portfolios of banks across the whole world. International banks had bought enormous volumes and in addition had held them off their balance sheets (in special purpose companies which were not sufficiently monitored). Once the property bubble burst the balance sheets were checked for other risky investments (securitisations, ABS, CDS[5] etc.) and extensive write-offs were necessary. With every negative headline the share values fell and with it the recoverability of the assets. As a result further devaluations were necessary. Banks started to mistrust each other and refused to lend each other any money.

When Lehman Brothers Inc. went bankrupt in September 2008 hope was lost that big ships are unsinkable. The result was a further need for write-offs, new risk assessments and sinking share values etc.[6] We could call this deleveraging with a moving target.

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[3] E.g. 1.6% (8%*20%). For criticism of the rating agencies see *Freixas* (2009).

[4] *Jickling* (2009) estimates subprime loans to amount to \$ 1 to 1.5 trillion as compared to a market size of mortgage loans of 11 trillion and total US outstanding debt to be \$ 50 trillion (see also CSR-Report 2009). Subprime loans would thus be less than 10% of US GDP and 2% of World GDP.

[5] ABS Asset Backed Securities, backing of a security through different kinds of assets (if through a mortgage then, Mortgage Backed Securities); also known as Collateralized Debt Obligation; CDS Credit Default Swap, tradable security, where the owner receives payment if an underlying bond or loan is not repaid (type of loan security which is also tradable e.g. if there is a default, there is still payment under the swap, even though the owner has suffered no damage (risk is swapped).

[6] Losses due to the insolvency of other financial institutions are estimated to be around USD 1000 billion (1% of US-GDP).

There are however more fundamental macro and micro economic reasons for the instability of the financial market, in general, and at that point in time, and reasons why the breakdown in one segment of the market in one country could lead to the breakdown of the entire world market.

One of these reasons lies in the worldwide surplus of capital seeking to be invested or be turned to profit, which increased over the last decade. China and Russia and other countries rich in raw materials and oil had built up currency reserves, in part also because they wanted to prevent or limit the appreciation of their currency (China). The unexpected growth of the world economy - it expanded by nearly 25% over five years - brought with it savings at a national level and profits from businesses which were not fully invested. The high growth of world economic output revealed shortages in raw materials and energy, it boosted food demand (intensified by changes in diet to more meat consumption in emerging countries and failed crops). This situation meant there was the opportunity to exploit these real imbalances with speculative trades.

The low interest rate policies in the USA after the Dot.Com crisis around the millennium were only corrected very late and rather hesitantly. *Taylor* (2009) shows how the US Fed was much more reflationary in comparison with a rule which takes into account the risk of inflation and growth (output gaps). Thus permissive monetary policy following the Dot.Com crisis was a central factor in the deepening of the crisis[7].

Capital in search of a yield was invested to a large extent in the USA. This allowed there to be a credit financed growth in consumption and a boom in construction without sufficient equity to back it. It financed a trade deficit and a budget deficit in the USA. Imbalances which were already known about and had in part already existed for decades persisted. State Funds (Sovereign Wealth Funds) in Russia, China and Indonesia as well as the oil states tried to buy "western firms" (although most of these were prevented with reference to security reasons, e.g. UNICOAL etc.). This shows how capital was seeking and continues to seek alternative forms of investment (next to government bonds and shares).

The liberalised financial markets across the world facilitated and propagated growth and indeed channelled it into many parts of the world. The differing rates of growth in different countries and for different products (precious metals, raw materials, oil and food stuffs) as well as for different industries allowed for and necessitated very differing returns. This made it possible to obtain good returns through wise investment choices despite a surplus of capital across the world. This rather pleasing tendency, namely more thorough searches for investment opportunities and the ensuing reduction in economic imbalances, must be balanced against the not so pleasing characteristic of "overshooting". Rising prices trigger rising expectations which in turn lead to cyclical imbalances and waves of speculation. It is

[7] Greenspan admits that low interest rates significantly contributed but stresses that it was more the long term fixed rates on the property market which could not be influenced by the Fed (*Greenspan*, March 11, 2009, The Fed did not cause the Housing bubble).

for this reason that financial markets are subject to more rigorous regulation than product markets.

However, the existing regulation was slowly undermined in the last few years by the innovation of a multitude of new financial instruments, by an increased internationalisation of the financial markets and at the same time a deregulation of the markets. Investment banks were regulated differently (less) to normal banks, Hedge Funds less than Pension Funds, Special Purpose Vehicles less than their founders, and multinational firms were not sufficiently monitored by national regulators. In the USA the level of regulation varied according to the type of business (reminiscent of the earlier sectoral divisions and compartmentalisation of the financial sector according to *Leijonhufvud*, 2009). The focus of any regulation was sectoral, national and static. Cyclical and systemic risks were not sufficiently monitored.

The imbalances from country to country and between different product markets, and the high earnings from financial market innovations were a feeding ground for unrealistic and high expectations[8] for returns on investment. These could in turn only be fulfilled through more risky innovations, higher leverages (indebtedness) and unrealistic evaluations of risk. Financial innovations no longer served to more speedily balance out imbalances or to protect oneself against risks (hedging) but rather served to intensify speculation on falling share prices etc. Speculating successfully was much more profitable than real investments. A whole new class of investor jumped on the band wagon and fraudulent investors managed to creep their way on board.

In general the pressure to make profits which were higher than historical averages and in addition higher than current profits was enormous. Anyone who was able to bring in large returns or who could at least account for them was inundated with bonus payments. Bonuses were often linked to the return on equity. However, share capital, in the narrow sense of the term, was expanded using intermediate forms of equity (hybrid capital, mezzanine financing). The increase in borrowing was then justified and backed by share capital in the wider sense of the term (the borrowed finance). This meant that on the one hand there were higher rates of return on the narrower concept of equity capital (for which a company remains liable to its investors) and on the other hand the companies were far too indebted ("over-leveraging"). In a crisis the one or other form of intermediate share capital and borrowed capital will be exposed as not sustainable.

Despite being focused on financial markets[9], national and international regulations failed to keep up with innovations on the financial markets. Fashionable ideologies were helpful for more risky transactions and meant there was a delay in updating the regulatory instruments[10]

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[8] The chairman of Deutsche Bank Ackermann set 25% as the goal for return on equity.

[9] *Niederauer* (2009) estimates that in the USA 39.000 people and in Great Britain 3.100 people work in regulatory bodies.

[10] See witness statement of Alan Greenspan where he states that he placed too much trust in the self regulation of the market.

to apply to the new products and the new global horizon. It also prevented new financial service providers (SPV's and Hedge Funds) from falling within these regulations. Even the national regulatory bodies in Europe were not sufficiently aware of the problems. The personal networks between the financial world, politics and management were very close (especially between the investment banks and the US government). The irreconcilability between the listing of rating agencies on the stock exchange and the necessary pressure to obtain returns was not registered.

Overview 1: Overview of the causes of the crisis

Trigger:	Unsecured loans to US home owners Politically welcomed, cleverly sold Bundled, rated and passed on
Regulation Failures:	Underestimation of risks and belief in self regulation Overwhelmed by innovations and internationalisation Pro cyclicality were supported by rules (mark to market valuation, Basel 2) Oligopoly structure of rating agencies, incompatibilities; stock market listing Neglect of cumulative systemic risks Insufficient regulation of the derivative market, SPV, Hedge Funds
Inflated Expectations of Returns:	Heterogeneity of profits across to countries/businesses, activities New forms of equity substitutes Leveraging of banks, the firms and consumers
Imprudent in incentive systems/risk management:	Bonus for short term success, stock options Overleveraging and hybrid capital Illusion about the benefits of mergers and firm size (market wide oligopolies) Speculation as an attractive career Higher earnings in financial capital relative to real capital Risk free promises from advisors, pension funds in mathematical model
Macro - economic imbalances:	Savings surplus of the emerging Asian countries, oil producers Triple deficit in the USA: trade, budget and savings Insufficient reduction in money supply after the recovery in 2002 Reinvestment of rent seeking capital in the USA
Aggravating factors:	Bubbles in currency, raw material, oil and food stuffs Specialised plus just-in-time relationships with purchasers/subcontractors Short-term view regarding profits, accounting rules and analyst's reports Shortages of raw materials, energy, food stuffs Unequal income and wealth distribution Provision of loans and then selling them on ("originate to distribute")
Weakness in coordination:	IMF, World bank, G7, competition policy, tax havens Underestimation of systemic risks

In addition there was insufficient monitoring by the authorities and dialogue with the market players, and a few key rules for financial transactions were actually loosened over the past few years. The rule that assets should be valued using the current market value (mark to market rule) was expanded and short sales became easier (you no longer needed to even lend the share that you had promised to sell if you did not have it). Greenspan declared that one should not fight economic bubbles using monetary policy, but rather wait for them to burst and clean up the fall out afterwards. It was beneficial to markets (and indeed they were able) to regulate themselves.

The American principle of using even the most short-term information and of placing too much value on quarterly profits (for bonus payments and for valuing companies and shares) put pressure on other economic systems. Accounting rules which demanded a speedy adjustment of assets according to the current share price (IFRS), also served to deepen the crisis once the downturn had started.

Transmission to the real economy worldwide

The financial crisis hit at a time when the business cycle was good but on the decline. In 2008 there were massive shortages in oil, raw materials and food accelerating inflation, fostering speculation and covering the first signs of the transmission of the financial crisis to the real sector. High inflation (4% in the EU and double figures in many countries) led to higher interest rates and a monetary policy unable or unwillingly to react to the first signs of weakening of the world economy. Recall that the ECB increased interest rate as late as in June 2008 a date in which recession has already started (seen with the benefit of the hindsight). High interest rates, the breakdown of the US housing bubble followed by the end of the stock price boom, the realisation of the extent of toxic assets led to restrictive lending and it is this restriction which led to a crisis in the real economy. Share prices collapsed worldwide as did the prices on the raw materials and energy markets. Investment was reduced, firstly in large construction projects and in foreign direct investment and then in the equipment industry, stocks of raw material and finished products proved to be much too high for this new situation.

Initially the transmission happened in the USA, but very quickly in all European countries and then in Eastern Europe because American and European banks led the expansion there. Since China's growth was based on export growth, the crisis was also transferred to China. The decline in the number of orders and in the prospects for growth led to share prices falling dramatically worldwide. This in turn led to further gaps in the accounts of firms and banks which had used shares to secure their portfolios. The attempts to improve the ratio between credit and capital (de-leveraging) ended up becoming a moving target – what appeared on the previous day to be an improvement in the equity share ratio based on the share prices ended up being insufficient when measured against the share prices of the following day. This is the nature of cumulative dynamics (processes). The crisis in the financial sector hit the real economy, first and foremost international and volatile markets or those where technological developments had been neglected (car sector).

The growth of the world economy slowed from 5% (2007) to 3% (2008) and this year (2009) the world GDP will decline for the first time since the Great Depression of 1929/32. The economies of the USA and Europe already shrank in the last quarter of 2008 and the GDP in these areas will decrease from 2% to 4%. Orders and production declined in double figures in the first quarter of 2009 (in comparison with previous years), in some sectors they have shrunk by almost a third and in the car sector in part by up to 50%.

3. Empirical Evidence from Previous Crises

A comparison with the Great Depression of 1929/32

The final outcome of the financial crisis on the real economy is still unknown. Therefore a definitive comparison of the severity and the length of this crisis with the Great Depression is not possible. What is possible is a comparison of the base levels at the start of both crises. Austrian GDP is seven times as high as at the start of the Great Depression[11]. The GDP in the USA in 2008 is 13 times higher than in 1929. The decline of even a few percentage points, as is expected today, would be sorely felt, especially if it disproportionally affects the lower incomes. The development of a social system, pensions, a minimum level of social benefits and a state healthcare system all safeguard much more effectively against hunger and poverty than was the case in the great depression. Even if, like the author, you are of the opinion that for a rich country actual poverty and the numbers of people potentially threatened by poverty is too high (defined according to today's standards of relative poverty, which means below 60% of the median wage), the type of poverty arising due to the crisis in 2008/2009 is still a different one.[12] This holds at least for industrialised countries.

The decline in GDP in Austria between 1929 and 1933 was 22% (-10% in 1932, the year of the greatest decline), in the USA the decline was 28% and in Germany 16%. The unemployment rate in Austria reached 25% with employment sinking from 2 million to 1.6 million (-20%). Unemployment in 2009 might reach 5.3% (according to Eurostat Labour Force Survey) and according to current forecasts (June 2009) it is set to rise to 5.8% by 2010[13]. The extent of the decline in employment is different even in this dynamic perspective.

Even share prices fell more dramatically in the Great Depression than today. The share price index of Standard & Poor – for which there are probably the most reliable historic data -

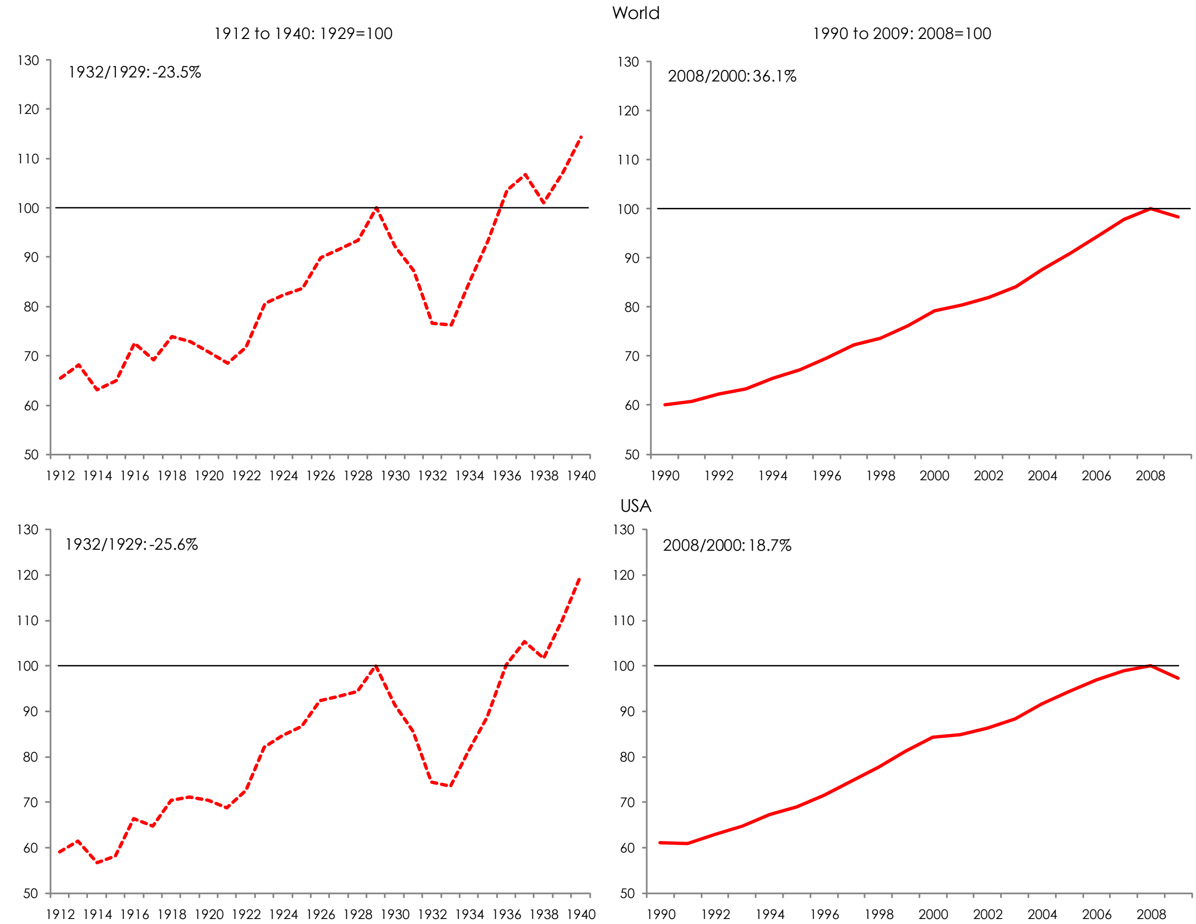
[11] More precisely in 2008: 7.65 times as high as in 1929, 9.54 as high as in 1932.

[12] Cf. the definition of absolute poverty (which is defined as an income of between 1$ to 2$ per day in real terms) with the concept of relative poverty which depends on the level of income of a country and e.g. is measured as 60% of median income.

[13] According to the Austrian national statistic the unemployment rate is predicted to increase to 7.4% in 2009 (8.5% in 2010).

collapsed by 82% between the 2nd quarter of 1929 and the 2nd quarter of 1932 (i.e. it sank to less than a fifth). Today US share prices have fallen by about 50% (start of 2009 compared with start of 2007), and thus share prices are now at the level of the mid nineties.[14]

Figure 1: Economic Growth Since 1912



Q: Maddison, IMF; WIFO-Database; usgovernmentrevenue.com. Remark: Data for world GDP available for every fifth year, annual data were interpolated by using annual data for nine countries.

There are some months where the decline in orders, exports or industrial production is as dramatic as in the Great Depression. [15] Quarterly figures show this decline very clearly, as do some countries (Japan, Latvia). For the view that the extent of the current crisis is comparable to that in the thirties see *Eichengreen – O'Rourke* (2009)[16]. For a contrary view see e.g. *Romer*

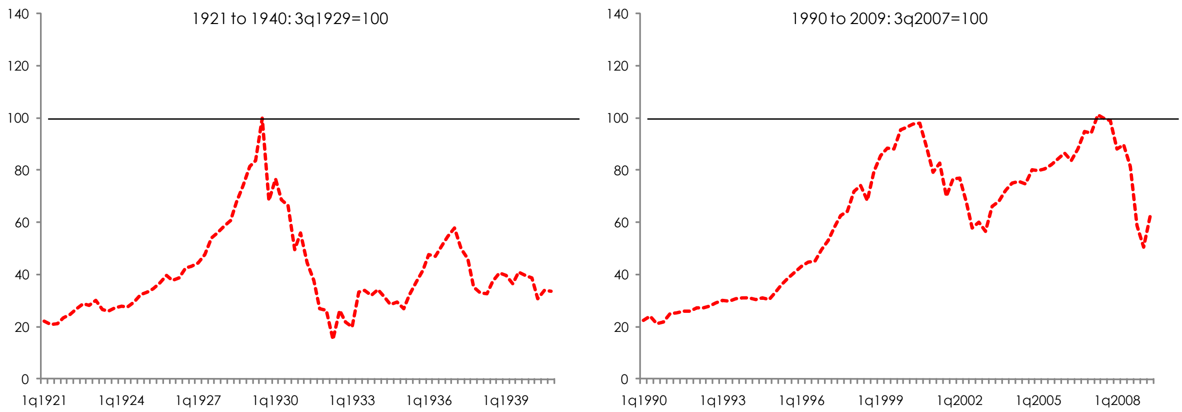
[14] The Standard & Poor Index rebounded to 990% (August 18th; this is 30% below the level of beginning of 2007).

[15] Cf. *Eichengreen – O'Rourke* (2009). The strongest declines were at different times in different countries ranging from the 2nd quarter of 2008, or 3rd quarter of 2008 to the 1st quarter of 2009.

[16] This part compares industry output with world trade on a monthly basis starting in April 2008 to June 2009.

(2008). It comes as no consolation that then, as now, the decline came in stages and one believed that the bottom had been reached. However, at least for GDP, employment, and unemployment, the severity of the crisis is not comparable. None of the current forecasts for the world economy for 2009 foresee a decline of more than 1% to 2%.

Figure 2: Comparison Stock Market Decline (relative to peaks, S&P index)



Q: WIFO calculations, League of Nations (1945), *Shiller's* homepage.

Overview 2: Industry production relative to peak

	Peak 4q2007		1q2009/peak
Austria	120.6		-19.9
Germany	117.1		-23.4
France	107.1		-20.8
United Kingdom	105.6		-18.1
EU 15	*111.4*		*-21.0*
EU 27	*113.0*		*-21.1*
Slovenia	121.5	1)	-25.2
Slovakia	160.3	1)	-30.2
Czech Republic	141.2		-31.5
Poland	134.5		-13.4
4 new members	*139.4*		*-25.4*
USA	105.3	2)	-15.4

[1]) 2q2008. – [2]) 3q2007. Q: Eurostat.

Comparison of length and severity of other crises

Reinhart – Rogoff (2009) researched 120 crises over the past 100 years for their length and severity.[17] The crises covered ranged from the Great Depression of 1929 to the "lost decade" in Japan. Crises in Asia in 1997 and the Scandinavian countries in the Nineties were also considered in the comparison. On average the crises lasted for completely differing amount of times depending on which indicators were used. This is probably the most important finding for the current crisis. When measured by house prices, the average crisis lasted six years[18], by share prices 3.5 years. In industrial production the crises lasted on average two years, measured by the unemployment rate however over 4 years. If you consider the start of the recession in the USA as the first quarter of 2008, the "predicted" end would be the start of 2010. The effect on the labour market will, in any case, be more prolonged.

However, these findings should not be overestimated since the crises all had different causes and reaches and the countries had in themselves differing levels of development and indebtedness. Furthermore, there are two characteristics of the current crisis which make it stand out. Firstly it is worldwide and not regional (this could prolong it) and secondly economic policy was engaged speedily to counteract it (in most crises it was strongly restrictive).

Another set of evidence (cf. *IMF*, 2009; *Danninger*, 2009) shows that crises which began with a crisis in the mortgage sector and those which are accompanied by a crisis in the financial markets sector last longer (even more so if the crisis contains both elements). This suggests that the current crisis should take longer and the stabilisation seen in mid 2009 is just an intermezzo.

4. The Reaction of Economic Policy

The task of economic policy in the current crisis situation is to

- reduce interest rates and increase the money supply (or slow down the decline in volume of loans and money) and for central banks to buy securities which they would normally not buy ("quantitative easing"),
- support total demand by increasing public demand or by providing incentives to stimulate private consumption (e.g. tax cuts),
- reduce uncertainty with measures ranging from securing savings to securing, by way of guarantees, the existence of systemically relevant banks,
- create trust in those areas where psychological factors (uncertainty) are important (on the national and international level),

[17] Other attempts along this line are *Caprio et al*., 2003, *Davis – Karim*, 2008.

[18] The "length" of a crisis is taken as the time between the peak of the given indicator and its lowest point.

- measures supportive of short-term demand should also contribute positively to long term growth and employment and should go towards solving some of the great challenges (climate change, migration);
- last but not least to analyse the cause of the crisis to limit the chance of a recurrence. The strategies selected should allow for positive developments in the time after the crisis

In principle economic policy worldwide and in Austria has tended to react correctly. This is a positive in comparison with the crisis of the thirties (1929/32). Monetary policy was used actively, public spending was increased and/or taxes cut. The activities were by and large coordinated across countries and countries unable to stabilise demand (due to high deficits at the start or to devaluation of their currency) got international help. Open and aggressive protectionism was prevented improving the own position at the cost of the neighbour, for example by reducing imports and increasing trade barriers was limited (soft protectionism like "buy national" provisions happened but were always opposed internationally and then limited). This in itself is a great success for economic thinking (more precisely for macro-economic thinking) and is evidence that politics has learned a great deal from the past.[19] What is also to be welcomed is that those economists and institutions, who have always claimed that markets reach their own equilibrium (automatically and quick), were also supportive of an active monetary and fiscal policy to combat the crisis.

Monetary policy, fiscal policy and guarantees

It is yet to be seen whether reactions to the crisis were adequate and sufficiently fast. It also remains to be seen whether a consensus about policy measures continues even if the crisis drags on for a longer and when the negative effects of the prescribed policies (budget deficits, nationalisation, and increased money supply) also in themselves require action. Conflict potential will increase when asymmetries in national measures lead to the competitiveness of individual firms being distorted. Distributional conflicts will also occur when questions such as who is going to carry the cost of the crisis and which activities will be financed by the state are debated. However, the general reaction of economic policy was encouraging, appropriate, and ideology neutral.

Monetary policy has reduced interest rates, in the USA and Japan to almost zero. The EZB did actually increase interest rates in summer 2008 and is a bit more hesitant in its approach as it keeps interest rates above zero. And *one could question why bank deposits in the central banks still have positive interest rates (and not a penal interest rate since this decreases interbank loans) but that is an issue for specialists.* In addition central banks have done all they could to increase money supply: they have made money available, they have bought

[19]One can only hope that this continues. Since the negative effects on the real economy are still going to increase politicians are going to come under increasing pressure. Already now people are trying to influence exchange rates, to protect their own banks and businesses and to favour their own economies with any stimulus packages.

securities and commercial papers (quantitative easing) and they have helped forge and establish guarantee programs and packages for banks.

Overview 3: Strategies to Combat the Crisis (in addition to regulatory reform)

Monetary Policy	Reduce Interest Rates Increase Money Supply Purchase commercial papers including private loans
Fiscal Policy	National, international, regional stimulus programmes Lifting formal/informal barriers to the take up of new debt Strategic spending (future investment: education, R&D, green technology) Improve the incentive structures of taxation
Guarantees	Savings Small Loans Long term industry financing Small pensions, minimum level of social insurance benefits Fight poverty through employment
Reduce Risks	Currency fluctuation: coordination, corridors Improve incentive structures: transparency, accounting rules
Working Time	Combine short time work with training, certificates and qualifications Reduce youth unemployment through training Making informal jobs more professional
Reduce mismatch between supply and demand	Career advice Re-training, mobility increasing measure Increasing choices (type of cars etc.)
Reintroduce buffers and reserves	Longer rather than shorter term success criteria Foster non-market based relationships, trust Stock piling, regional supply relationships Fixed interest rates, less complex financial products Diversified product and supplier networks Stricter monopoly controls, monitor inconsistencies
Promote European model	Strengthen, medium term, consensual solution Expand role as environmental forerunner, Turn green technologies into a leading segment of the economy Promote electric cars and solar powered charging stations Reducing social insurance payments (not benefits) for low incomes

Fiscal policy adopted an expansionary stance in almost all countries. Increases in budget deficits as a result of reduced tax revenues and increased government spending e.g. for unemployment benefits were actually permitted ("automatic stabilisers"). In addition fiscal stimulus packages were created in which there were tax cuts and increases in expenditure, including expenditure over and above the costs of recapitalising the banks. The cuts in taxes stretched from income tax to VAT. The size of the stimulus packages is calculated differently depending i) on whether the scope of the stimulus is limited to discretionary measures, ii) on which policies would have been implemented had there not been a crisis (i.e. which other policy measures are included in the stimulus packages) and iii) on whether or not the effects of any stimulus are calculated for one year or more. There are many extensive international comparisons by the OECD (Interim Report 2009), by the European Commission (2009) and by *Saha – Weizsäcker* (2009). Undisputed is that the packages in the USA were bigger than in Europe (OECD: 5,6% on average 2008/10, compared with 0,9% in the EU). In Australia, Canada, New Zealand, Korea and China the packages were also very large. In Hungary, Iceland, Ireland and the Baltic States there were in fact negative stimuli as a result of the very high deficits of the state. The tax cuts in the packages are higher than any additional government spending (0.8% vs. 0.7%). The multipliers of tax cuts are considered to be less (according to the OECD, 0.3 to 0.5 for the range of taxes considered, 1.1 for public expenditure). It must be said that these calculations assume that all expenditure can be implemented without any delay which is not the case for large infrastructure projects, but also for increasing employees in decentralised agencies. This is a serious fault in economic modelling; that savings reduce the multiplier calculated for tax reductions, but the implementation lag of government expenditures is ignored.[20]

Overview 4: The size of stimulus packages (as a % of GDP)

	2009/2010		2009/2010
Germany	1.65	Poland	1.25
France	0.55	Hungary	-4.40 [1)]
Italy	0.00	Czech Republic	0.75
Spain	1.45	Slovakia	0.05
Netherlands	0.95	Slovenia	0.55
Belgium	0.40	Cyprus	0.05
Austria	1.80	Estonia	0.25
Portugal	0.50	Malta	1.60
Finland	1.70	*8 new members*	0.01
Greece	0.00	USA	5.60 [1)]
Ireland	0.50		
Luxemburg	1.30		
United Kingdom	0.70		
Sweden	1.50		
Denmark	0.60		
EU 15	0.91		

Note: Minus = budget consolidation; pro-cyclical policy: Hungary, Romania, Baltic States. [1)] OECD. Q: European Commission, OECD.

[20] For example if government sets aside money for infrastructure and transfers the money to an "infrastructure agency" the model assumes that the money is spent immediately, even if the money is used only six month later.

In almost all countries the public deficits are running at over 3 percent[21] (which was set as the upper limit by the EU). In the USA and in Great Britain public deficits are running into double figures. In some countries there are also short term purchasing incentives (scrapping premiums or reduction of VAT).

Governments are providing guarantees - to a large extent for savings, in part for bonds and only to a small extent for loans. The state thus prevents the complete collapse of the large banks and financial institutions and in some cases also supports large firms (automobile industry)

In many countries labour market policies have been used to try preventing the effects of the decline in economic activity from affecting employment. Measures used include supporting short-time work and/or training programmes. This is likely to be the reason why e.g. in Germany and Austria the increase in unemployment and the decline in employment compared with the decline in GDP (elasticity) is actually less than in the USA. A less pronounced decline in employment in turn stabilises GDP via consumption. The impact of the crisis is also reduced if the mismatch between the supply and demand of qualifications is minimised and if regional and job mobility is increased. In many countries before the crisis the job market was close to full employment, especially for qualified people, and firms were limited in their ability to expand production. Indeed even during the crisis there are some job vacancies where the appropriately qualified people are lacking.

Strategic content of stimulus packages

It is important which expenditures should be increased and which taxes should be cut in a recession and a forteriori in a severe recession.[22] One priority is that results are speedy. Almost automatically policy makers – and often economists, too – think of expanding spending on construction and cutting those taxes which are viewed as putting the brakes on consumption (VAT). However, a more intelligent approach would be to spend the money on measures which are effective and necessary in the long term. This is true even if the crisis is short but all the more so if it is long. Increasing investment in construction and specifically investment in highways and physical construction appears at first to be an easily solution since these are public investments. However, what is always underestimated is that the time lag between deciding to spend the money on a particular project and the commencement of construction can actually be up to a year.[23] Furthermore once a country has reached a particular level of development, as has long been the case in Europe, investment in construction has less effect on economic growth. Plant investment has a greater impact on

[21] The EU Commission reckons that in 2009 12 and in 2010 17 EU-countries will break the rules on deficit limits. The goal of the ensuing excessive deficit procedures should be to work on a medium term path of adjustment (while the countries are being encouraged to increase short term deficits).

[22]cf. *Spilimbergo* et al. (2008).

[23] Furthermore the share of imports especially for a large project (Tunnel, rail) is high in a small country. When you look at the whole of Europe this argument loses its importance.

growth and competitiveness and indeed in richer countries intangible investment in human capital and knowledge shows an even greater effect. It would be more prudent to spend the money on education (from kindergarten to universities) or on research and healthcare, and also to increase spending on environmental protection issues, since all of these actually create more jobs[24] and thus increase the growth path.

The counter argument which is often incorrectly put forward is that such expenditure only has any effect in the long term and thus no immediate effect. This is important for the supply side (strengthening production capacity and competitiveness). However, for measures intended to combat a crisis the effect on demand is crucial. Demand increases immediately as a result of investment in education, additional teachers are employed and when a school building is extended or thermally renovated. Furthermore, the dampening effect of imports on any stimulus package is actually much less when money is spent on immaterial investments rather than on construction. If you actually analyse the stimulus packages of the various countries we already see the move from construction to education (e.g. in USA).

Long term aspects should also be considered with any tax reforms. Ostensibly it seems attractive to reduce VAT so that consumption will increase. Or to reduce the price of petrol and car taxes so that people will drive more and buy more cars. But for the long term it is actually prudent to reduce income tax because this stimulates production and consumption stronger. Particularly effective is reducing taxes and social security payments for those on low incomes (non wage labour costs), because as a result more job vacancies are created. Indeed the former policy would also be the most effective on a short term basis to support the economy (reducing non labour costs at low incomes has a large effect on consumption).

Overview 5: Content of the Stimulus Packages (SP)

	Infrastructure		Science, R&D and innovation		Education		Green Technology	
	% of GDP	% of SP		% of SP		% of SP		% of SP
Germany	0.50	35.7	0.10	7.1	0.60	42.9	0.20	14.3
France	0.24	85.7	0.00	0.0	0.04	14.3	0.00	0.0
Finland	0.48	90.6	0.01	1.9	0.02	3.8	0.02	3.8
Sweden	0.27	42.5	0.29	45.6	0.02	2.5	0.06	9.4
Portugal	0.03	4.1	0.13	17.8	0.41	56.2	0.16	21.9
Poland	0.07	84.7	0.01	15.3	n.a.		0.00	2.4
Norway	0.16	66.7	0.01	4.2	0.01	4.2	0.06	25.0
Europe	0.27	41.0	0.09	14.0	0.22	33.6	0.07	11.4
Europe (incl. Norway)	0.25	42.9	0.08	13.5	0.18	31.3	0.07	12.3
USA	0.70	38.9	0.11	6.1	0.58	32.2	0.41	22.8

Q: WIFO calculations using tip (2009), OECD, *Saha – Weizäcker* (2009).

[24] For € 1 billion of public consumption expenditure (among which spending on education)) 17.000 jobs are created, while a similar amount of spending on construction creates 10.000 jobs (more when renovating buildings and accessory construction trades, less when constructing streets or underground projects).

Environmental issues: should we put these to the back of our minds or tackle them now?

As far as environmental issues are concerned the crisis is often used as an excuse to limit environmental taxes, emission certificates and restrictions on the maximum emissions allowed by cars. Goals for climate change are also not the priority in people's minds. But in actual fact the crisis would be the ideal opportunity to push for energy-saving measures and to promote new technologies, both of which are crucial to combating medium term problems. "After the crisis" the energy shortage and global warming will yet again become big issues if not the most important issues. If alternative drive systems are currently too expensive then it is even more important to speed up and move forward with technical developments rather than subsidising the purchase of cars from the last generation. Renewable energy sources should also be promoted as this actually supports demand and helps the environment (and in fact means that countries can avoid fines for not reaching their Kyoto goals). Strategic forerunners in environmental policy actually have the chance to play a leading role as regards environmental technologies and to form partnerships with other countries for a (partial) exit out of CO2 technologies. Car manufacturers or sub contractors could specialise in efficient cars with alternative drive systems and therefore create for themselves an indispensable position in the value added chain of many producers.

The actual spending structure of the stimulus packages can be divided into expenditure on investments or on consumption. The former is higher in Europe, the latter in the USA (*OECD*, 2009[25]). A different categorisation of spending differentiates between spending on infrastructure, innovation, education and green technologies.

The share of spending on infrastructure was the highest of all categories in all countries - it must be noted that investment in green technology in the USA was 0.4% of GDP and only 0.1% in the European countries covered. The combined expenditures for intangible future investments and green technologies exceed the expenditures on more conventional infrastructure investments in the USA. This is not the case in Europe.

In summary the strategic content of the stimulus packets are disappointing. Investments in infrastructure dominate (meaning traditional Keynesian policies) and expenditure for education, research and the environment is very low. In Europe spending on the latter categories is even lower than in the USA.[26] The highest proportion of stimulus packets being spent on research is in Sweden followed by Australia.

[25] The comparison of the OECD contains 3 further components including transfers to the sub-national level and 2 smaller categories.

[26] Although one must say that the starting level in the USA for expenditure on the environment was also a lot lower.

5. After the Crisis

We do not know how long the crisis will last nor how severe it will be. But one thing is certain there will be a recovery and a world "post crisis". This world will and should, however, look different to today.

Reduced medium-term growth

It is certain that there will no speedy return to the growth rates we have known until now. The world economy will not grow at 5% a year as it did in the last five years. And it is very improbable that either the USA or Europe will grow by 2% or more. The reason for this is the increase in uncertainty and the systemic risks which all firms, consumers and investors will clearly have implanted in their memories (which does also have a positive effect). Every company will try to keep a better balance between equity and debt: collateral or subordinated debt and other forms of hybrid capital equity will be viewed with a more critical eye, consumers will be less likely to take on debt (or as in the USA will have to pay off their debts using savings) and loans in foreign currencies with risky repayment products will no longer be able to be used to build a house. The period of time where all economic players (banks, businesses and consumers) adjust their equity–to-debt ratio is a period of low growth. Low growth rates mean that the increase in unemployment as a result of the crisis cannot be reduced. In Austria and many other European countries a growth in GDP of 2% would be necessary in order to reduce unemployment. This also confirms the above conclusion: the length of the crisis will depend on which indicators are used. Even if production gradually increases again by 2010 – but remain in a corridor between 1% and 2% – the rate of unemployment is not likely to go down but rather it will continue to increase (even if the rates can be reduced as a result of higher qualifications or re-sitting school final exams.[27]

There is also the theory that growth rates following the crisis will be similar to pre-crisis rates because medium term growth is determined by the size (growth) of the workforce and by technological change. Currently there is excess capacity (because demand is less than production capacity) and normally any upturn is stronger if the output gap is big. The prognosis of a "V-shaped" recovery[28] which would mean that unemployment could quickly be reduced is, in my opinion, rather unlikely. Some models also show that a certain fraction of the potential output has to be written off due to the crisis.

[27] When the mismatch between qualifications demanded and supplied is less, the rate of unemployment is lower. Today the unemployment rate for unqualified people is at 15% and for people with a tertiary degree at 2%.

[28] For the opinion that the recovery will be steep because the production capacity allows for a quick increase in production see *IMF* (2009), *Mussa* (2008). Nevertheless even those economists who place a lot of emphasis on the supply side also agree that part of potential output will be lost due to the crisis (e.g. in the car industry)

Withdrawal of excess money and reduction of deficits

State intervention does cause its own problems and damage as is the case whenever you put out a fire. Once the credit will be recovered the current money supply will be far too big. In many countries public deficits will run to 10% of GDP and these will fall only slowly (because in the crisis there were tax cuts and tax revenues will be low as a result of slow growth). Nevertheless we should have learnt from the past that public deficits should not be reduced too early or too quickly (*Romer*, 2009). It is not sensible to reduce any deficit through increasing corporate or income tax as this in itself will merely dampen any economic upturn.

Any state support, injections of capital or guarantees will need to be withdrawn at some point. Some can more easily be withdrawn than others. There will of course be some complaints due to distortions in competitiveness. It is possible that inflation will increase after the crisis (which might be tolerated by governments as this has a debt relieving effect). Central banks prioritise price stability (especially the ECB), and the risk of inflation is low with a large output gap. The most inflationary pressure is likely to come from increasing energy prices triggered by a higher demand for energy in Asia. The most important factor in reducing debt will be an increase in the efficiency of public administration.

Intelligent Regulation

Financial regulation will take on a new form. Reforms have been discussed on an international and national level and some common themes have emerged. All financial products should be included in any regulation as should the level of equity as collateral required by financial institutions. Forming special purpose vehicles or passing on bad risk will no longer be so simple e.g. it could become compulsory to leave part of the most risky tranche of a securitisation on the books of a financial institution. Hedge funds – at least when they have reached a specific size – should have registration obligations (although their owners are strongly lobbying against this and some European countries are becoming somewhat weak in their resistance).

National regulatory bodies will become more tightly linked and an international agency which expands on and compliments the national ones is being discussed (Larosière-Plan, 2009). Checks should take place on a regular basis and should actually, on occasion, be carried out by the regulatory bodies of another country in order to squeeze out relationships and networks at a national level between the regulators and those that are being regulated.

A new and special regulatory mechanism will need to be found for multinational financial institutions. This will most likely be a multinational agency. The rules which apply to ratings must also be changed, the fact that rating agencies are listed on the stock market needs to be questioned and at the very least those requesting the ratings and those providing the ratings should also be subject to better regulation. Rating agencies should not be allowed to offer consultant services to institutions whose products they rate. The fact that American rating agencies dominate the market needs to be investigated and indeed, in general, the number of rating agencies needs to increase. Rules for any bail outs also need to be improved so that in any future crises intervention can be swift but not distort competition. Systemic risks need to be more widely included in the models on which financial regulation is based. The Larosière-Plan foresees a limit on systemic risks. A very important factor in any intelligent regulation is anti-cyclical rules regarding the equity ratio. Financial institutions should be forced to put aside a higher level of reserves during boom times for a certain loan risk class, a lower level during a recession for the same risk class (Hahn, 2003 and 2008, emphasised this point and the pro-cyclical effects of the Basel II rules;, in 2003 he was almost the only one in the general literature to write about this). Incorrect regulations with a pro-cyclical effect accentuate the inherent tendency on the financial markets to provide too many loans in euphoric phases and too few in a recession ("macro-prudential regulation" is anti-cyclical and requires higher reserves in good years (*Hahn*, 2008).

No revival of state ownership

The relationship between the state and the private economy will be redefined after the crisis. The self regulating mechanisms of the market have failed on crucial points, as have the thousands of employees in the regulatory bodies of the 27 European union countries and the multilayered specialist regulatory agencies of the USA. Despite new regional hot spots the world economy collapsed almost simultaneously ("multi polar world). Therefore, the stability and systemic risk of a global financial market needs to be afforded more attention in the future. If each year financial markets show a turnover of several times the value of GDP then new financial products do not only stabilise but can potentially destabilise the market. This effect is in addition to the historically well known waves of optimism and pessimism which are typical of the financial system (and investors), but which often get forgotten during periods of boom.

Nevertheless, the solution does not lie with increasing the proportion of nationalised businesses or the share of public expenditures in GDP. The state should strengthen its role in regulating those markets which are highly volatile or likely to fail. It also needs to adjust to the new environment of increased product variety, specialist solutions, internationalisation and globalisation. An efficiently run state which focuses more on the important public services does not necessarily have to cost more (*Bayer*, 2009). Its role as owner of car manufacturers or banks might be a short term necessity. However, the longer the state takes on the function of a business manager, the more certain it is that the disadvantages of public ownership will once again come to light (political influence, choice of manager, soft budget restrictions). In Austria, we know these disadvantages from the loss of billions of Euros in nationalised industries in the eighties and nineties of the last century, the meagre service of the railway company and the losses in the airline and rail industry.[29] We can still remember that it used to

[29] Nevertheless ownership was not the only factor that affected efficiency and profitability. Competition, regulation, management and sector of the economy all played a role.

take a long time to get a telephone (before there was liberalisation and increased competition in the postal industry through private firms). German regional banks, Austrian local governments and the Austrian Federal Financing Agency all speculated on the financial markets and canalisation networks and trams were sold by local governments to America and leased back again for tax purposes. The level of risk this entailed was severely underestimated.

When high levels of debt need to be paid back without rising revenues,, expenditure must be curbed. This means that there will be extremely tight budget restrictions for all forms of public expenditure after the crisis, even in the areas of research, training, modern infrastructure, the environment, health and age related issues. Indeed it is this very shortage of public funds which is an important argument for a strategic approach for government spending in stimulus packages, as outlined above. It is only if we invest in the promising areas mentioned before during the crisis that the long-term priority fields will actually receive the necessary means and funds that they require. Growth will be higher in the following recovery if investment in training, further education, innovation, environmental technologies and new drive systems for cars is carried out during the crisis.

Financial transaction tax - a sensible option for many reasons

The crisis, or the time immediately following the crisis, is the perfect time to introduce a financial transaction tax, namely the levying of a minimal tax of about 0.1% on every financial transaction (sale or purchase of shares etc[30]). Now is an opportune moment because there will still be large amounts of capital which are looking to be invested. It is politically opportune because the USA and Great Britain, who were both against its introduction until now, will both need to somehow increase taxes as a result of their extremely large budget deficits. It can also be seen as a small contribution from the sector which was partly responsible for the crisis and which also received huge sums of money to limit some of the damage to the economy. Furthermore, a financial transaction tax will serve to reign in the somewhat extreme area of short term transactions, which does not really serve to find market equilibrium but rather to make money by being a little faster (or technically better equipped). Such a tax conforms to the market relatively well since it does not ban transactions but merely makes them a little more expensive and curls an activity with negative externalities. It goes without saying that any financial transaction tax should be introduced on a worldwide basis and the USA and Europe could be important places to start.

The closure of many tax havens, making the obligations to provide information more uniform, and more strict in the case of a suspected tax evasion, are all steps towards an international framework for financial transactions and would also mean that the introduction of any transaction tax would be smoother.

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[30] More complex suggestions involve a different tax depending on the level of risk of the goods (shares, oil, gold) covered by the transaction.

The biggest danger: a new form of protectionism

Historians are all in agreement that the Great Depression was drastically deepened and extended through the use of protectionist measures. This time – at least in the first stages – the economic policy measures refrained from protectionism. EU countries tried to actively co-ordinate measures amongst themselves as did the EU and the USA. In addition a unified view of the problem was developed with the emerging economies of China and Russia (G20 summit). Finally the rescue packages for banks were also co-ordinated and their reach did not necessarily stop at the country's borders.

However, in the following there were and still are some clauses in the rescue packages which openly (as in France and China), feebly (as in the USA) or quietly (everywhere) favour the domestic economy. These burgeoning protectionist measures often managed to be eliminated or mitigated as a result of protests and negotiations. However, if the crisis lasts a long time and large national champions are in danger of bankruptcy and unemployment rises, attempts will re-emerge.

Protectionism has many dimensions - the devaluation (whether consciously or through lack of intervention) of the currency is one method. The structure of stimulus programmes is often tailored to the needs of one’s own economy. The call to buy domestic produce or to spend your holidays "at home" is a "soft" form of protectionism. When political tensions rise and radical parties have more influence the movement towards protectionism will increase. One of the important criteria in combating the crisis is that the world economy remains open.

The crisis as an opportunity

The post crisis world can also be a better one. In such a world private businesses and global markets dominate but financial markets will have been more intelligently regulated. Innovation not only increases GDP but is also directed towards achieving social goals (health, environment, fighting poverty). Investing in the real economy is once again favoured above investing in financial markets. The focus of a business is not only salaries and the value of the company is viewed in the long term and using broader criteria. The window dressing of accounts and off balance sheet transactions are not possible to the same extent as before. The rules of play for the financial sector and for rating agencies have been improved.

It is, however, important to note that following the crisis many problems will reappear in the "old order". The competitiveness of a country will be determined by education, innovation and technology. Eastern Europe and neighbouring countries as well as China, India and South America will have above average growth. Global warming will continue to be a central issue. Migration will also still be necessary as will improving the integration of migrant workers.

The serious damage caused by the crisis is not an occasion to gloat or feel triumphant. Some of the causes of the crisis do originate from the character of the "American model/way" or the "Anglo-Saxon economic model" - namely the focus on short term profit, linking the salaries of the managers to the share prices (instead of broader performance criteria[31]) and the assertion that everything can be financed by credits and higher leverages. The belief in the self-regulating ability of the market and particularly the financial market was especially strong in the USA and this despite evidence to the contrary. Innovative financial models are also allowed even if they fall outside the remit of the regulations. On top of this comes the fact the USA and Great Britain ignored their own targets for a balanced budget and the crisis came at a time when they both had enormous budget deficits.

Post-Crisis –it is not business as usual

Currently it does not look like this financial crisis will reach the dimensions of the Great Depression in the thirties. However, it is also not a typical crisis. This can be seen from the diagram in Overview 1 which shows the causes of the crisis. It came about from a combination of many factors namely: erroneous macro-economic trends, market failure, irrational formation of expectations flaws in the incentive structure and risk management in businesses, weaknesses in the coordination of economic policy and market regulation across the world. It will not be easy to remedy the macroeconomic causes if the economic players have themselves differing economic and political goals, and if no co-ordination exists or is actually desired. At the end of the day China actually wants a trade surplus, in the first instance to catch up with the leading economies; secondly to employ the masses of people who were working in farming and are now streaming into cities; thirdly it wants to be politically and militarily strong; and fourthly never to be dependent on the International Monetary Fund. For this reason China will not sufficiently revalue its currency, i.e. in line with productivity. The USA wishes at the same time to promote consumption, technologically be in the lead and spend on its military. The financial services sector wants high returns, with little regulation and wants to be able to increase its return on capital through increasing its leverage. Shareholders want high returns and therefore push firms to employ the best managers and to use incentive structures which ensure that profit goals are pursued energetically by their managers. The way to converge the otherwise strongly diverging goals of managers and shareholders was via high bonus payments and linking pay to the share price[32]. It is not easy to resolve macro-economic imbalances, to implement an intelligent regulation structure and a sophisticated incentive structure in firms which is more directed towards the long term success of all stakeholders – but it is necessary.

[31]Making an additional salary payment to managers based on options in shares of their own business.

[32] Cf. literature on Managerial Economics, according to which managers maximize their own interests, the size of the company and the number of employees. The shareholder value approach was the answer to this problem. It suggested binding the interests of the managers more closely with those of the shareholders (using bonus payments and stock options).

Europe caught between being the "better model" and rather "hesitant in crisis management"

Europe is not problem free: the low growth rates in Germany, France and Italy even before the crisis and falling short of reaching the European goals for research, training and the environment – especially in these countries – is not exactly something to shout about. However, overall, after the crisis, it is likely that people will be looking to learn more from some of the fundamentals of the European model. The obsession with short term gain is not so strong in Europe where the interests of "other" stakeholders are also considered. Next to listed companies, Europe also features more mixed ownership structures (part listings, family ownership, strategic owners or trusts, public ownership) and there are more small and medium sized firms. Valuations of companies are not so closely linked to the daily share value and stock options are not as widespread. Across the world more countries are looking towards Europe and how it manages its economic systems, even though there is no actual unified European model. The most attractive model seems to be the Scandinavian one which combines openness to globalisation with pronounced responsibility of the state for education and equal opportunities. It also combines social insurance with labour market flexibility and a combination of public and private contributions to health care and pension funds. There is also great respect for the expansion of the EU, the introduction of the Euro and the political crisis management which is partly extended to neighbouring countries. We could and should embark upon discussions about a future successful „European model"[33] and begin to question the dominance of the model of the "single remaining world power".

Nevertheless the European Union needs to take on a more prominent role in coordinating economic policy during and after the crisis. Stimulus packages in the EU are on average smaller on a national level than in the USA (cf. Overview 2 or *Saha – Weizsäcker*, 2009) and the support of national stimulus packages through EU projects is small. It was positive that the EU Commission called upon countries to increase their spending during the crisis and that the stability goals have been put on hold. Most European countries have now deficits above the 3% limit and the commission will send "blue letters" demanding policy to reduce deficits, but without any sanctions as stipulated in the contract for crisis situations.

It seems that slowly the powers who would prioritise budgetary stabilisation over employment and growth are once again growing in strength. The solidarity which is being shown with the new EU member states is rather selfishly motivated as opposed to demonstrating concern for EU-wide issues. The EU also needs to take a stronger stance against the rather unfortunate effect of the US rating agencies. The solvency of a country cannot only be judged by its budget deficit and its proximity to crisis areas but also by its growth potential, its ability to reform, its mechanisms for reaching consensus and its ability to prevent social and ecological problems in the future. Furthermore, the rating agencies, without any real understanding, use

[33] Countries on the „edge" of Europe like Ireland, and Spain in the west and Hungary, Bulgaria and the Baltic countries in the east have already sent warning signals.

all their power to work against macro-economic measures. While individual governments are trying to promote coordinated stimulus programmes (which are more effective than individual programs as these tend to benefit neighbouring countries more than your own economy), rating agencies merely aggravate the coordination failure of international economic policy: the rating agencies keep putting pressure on individual governments by informing them that they will lose their AAA rating if they increase their public expenditure.

6. Summary

The financial crisis could have already passed its peak in 2009. The crisis of the real economy only started with full force at the end of 2008/ beginning of 2009. It will dominate 2009 and will certainly also have consequences for 2010 and the medium term. As a consequence, further feedback loops with the financial sector cannot be excluded. Even when production has stabilised there will be a period of slow and imbalanced growth. Any turnaround in employment will take several years. Protectionism and radical political views may not be ruled out.

The crisis is the greatest challenge of our generation, as well as for the legitimisation of the western market system and a liberalised and globalised financial system which will continue to take on an ever more central and global role. Liberalisation and globalisation of the financial sector contributed pivotally to the strong growth of the world economy (+25% between 2002 and 2008). It also contributed to the fact that the European enlargement countries (and their neighbours) were able, to a large extent, to catch up with the rest of Europe and the fact that hundreds of millions of people in China and India came above the poverty line (defined in its lowest terms). However, a globalised financial system also contributed to increased price volatility for raw materials, oil and food stuffs. The crisis will also cost many jobs and bring with it disadvantages to those who had hoped for a better quality of life.

It is too soon to be able to carry out a final comparison between this crisis and other crises. The decline started in 2008, and as with most crises including the Great Depression of 1929/32, followed a period of extreme growth. This time the growth was high particularly in Asia and the European enlargement countries. In the twenties, growth was high in the USA (lower in Germany and Austria). Then the decline of real GDP was over 20% (spread over three years), unemployment climbed to 25%. According to current forecasts we can expect growth again in 2010. If this is the case the world economy will have shrunk for one to one and a half years, and the decline of GDP on an annual base will be between 2% for the world and 2% to 6% for the leading economies. The length and the depth of the decline would be historically speaking relatively small, but specifically in comparison with the growth rates that came before. In some countries the decline reaches double figures but not in any industrialised country. What was comparably strong was the decline in industry and exports during some quarters. But industry counts for a small amount of value added and the domestic economy was stabilised using stimulus packages. Nevertheless the problems of the industry sector could cause a production decline and insolvencies of firms in the service sector and thus lengthen the crisis. In this crisis the share prices fell by about 50%, although the peak can be measured partly at the value in 2007 and partly at the value before the Dot.Com crisis. During the Great Depression it plummeted by 90% in the USA and less in Europe.

Thus according to our current level of knowledge the crisis is unlikely to reach the same levels as the Great Depression. This is due to the fact that economic theory drew lessons from the twenties and economic policy by and large followed these lessons. Even those economists, politicians and institutions who, to some extent, contributed to the current crisis through their extreme belief in the power of the market to regulate itself, are working constructively and without clinging to ideologies to limit any damage caused, or simply keeping quiet. Nevertheless the most important lesson still needs to be heeded, namely that the money and fiscal policy used to strengthen the economy must not be withdrawn too quickly (Romer, 2009).

There is a broad reaction of economic policy, even if it is slower in some countries and sectors and even if there are some regional gaps. What is however often missing is a strategic approach, meaning that measures that are taken are of little long term use (to raise income and employment in the future and to solve climate change issues). For example, the tax structures have not been changed to make it easier to create jobs or to reduce emissions. The measures that are taken are often those which seem most necessary at the time (boosting car sales, construction projects). Public money is often spent on the principle of who needs it most (which risks keeping inefficient businesses afloat), rather than according to where the greatest opportunities lie. Those countries who do use their means in a more strategic and future orientated way will have more success in the future, especially because after the crisis public finances will be very tight.

In order to be able to use the crisis as an opportunity it is not only regulation which needs to be improved but also incentive structures (integrate more long term goals), disproportional rises in financial investments need to be curbed (with a financial transaction tax), and new financial products need to be transparent and better monitored. In those sectors of the economy with high systemic risk such as banks, higher buffer reserves are necessary (in the form of equity).

The most important reform for the financial markets will be an intelligent and international regulation where new financial innovations are also covered, where some risk is retained in a securitisation, where there is transparency where risk is passed on, and where there are regulations regarding anti cyclical levels of reserves (high during a boom and low in a recession).

In the short term it might be necessary to part nationalise some financial institutions but this is not a sensible course of action in the long term. If the public expenditure quota and that of tax and social insurance revenues are already running at between 40% and 50% there is not much room for manoeuvre. After the crisis there will be a period of slow growth due to uncertainty in the markets and an increased amount of self financing. It will also not be easy to deal with the damage caused by fire fighting measures (increase in money supply, subsidy structure, repayment of the participations the state took in the financial institutions).

The crisis was not only caused by actions on the financial markets but was also due to fundamental imbalances in the world economy, mistakes and deficiencies in the regulation of financial markets and problems with micro-economic incentive structures. For years there has been an increase in the amount of capital which has been seeking investment and complete differences in the rates of growth and returns depending on the country, the product and the raw material. Furthermore, the triple deficits of the USA – trade, budget, and savings – also contribute to worldwide instability. The mirror image is that US consumers are incredibly over indebted and finance institutions have an ever higher debt as compared to their equity capital (leverage factor). Many raw materials have become scarce. Too little attention is paid to trying to use raw materials more efficiently as well as available alternatives or indeed to developing alternatives.

After the crisis there will be no speedy return "business as usual". In economic terms this means slow growth and a very slow decline in unemployment. Behaviour patterns (risk assessment, willingness to take on debt) and the rules of play (regulation) will have to change. Only the future will show whether this should be seen as a change of paradigm or merely a fine tuning of the current market economics model. In the first instance it is important to be able to describe the workings of the current and future paradigms before we make any quick judgement. However, in many areas a new direction is needed e.g. you can't on the one hand know the consequences of global warming and on the other hand continue to allow emissions to increase. Large differences in income and wealth lead to political and social tensions. The goal of having sustainable increases in profits and income will come to the fore as opposed to optimising short term income. It can no longer be completely taken as given that our social and economic system is accepted, especially by the next generation which will experience higher unemployment and less job opportunities. This also needs to be worked on in order to avoid any political tensions after the crisis.

The European social and economic model has some characteristics which were ignored in other countries and thus facilitated the crisis, namely; long term planning, stable and not only market-based relationships and networks, higher regard for social cohesion and sustainable development. It should, therefore, and will in the future be seen as an attractive model. However, first of all it needs to be further developed and adapted to the conditions of the world wide economy just as Sweden, Denmark and Finland have done with their reforms over the last 15 years. Europe needs to act more decisively and with more co-ordination against the crisis and its effects on employment. It needs to avoid all types of protectionism and support weaker members and neighbouring countries. Only then can we Europeans learn a huge amount from this crisis.

The crisis management in Europe has by and large worked well until now, even if many things only happened one step at a time and stimulus packages are at the national rather than

European level. There were no demands at the European level for investment in the future and the issue of solving the climate change problem was under the pretext of saving jobs seen mainly in terms of the carbon leakage problem. However, there is also the evaluation of the US economist Jeffrey Sachs in the Financial Times with his positive characterisation of Europe, countering the popular assumption of "Europe being in decline" (for text see Overview 6).

The USA caused the crisis because neither self regulation of the private sector nor regulation of the supposedly best financial system (best governance and most trusted worldwide by investors) worked. However, the USA reacted speedily and decisively and according to current forecasts will start to grow sooner than Europe.

Overview 6: Jeffrey D. Sachs

Countering the opinion:

.... "Europe in decline .... increasing irrelevance .... relative economic decline"

"What about Europe's internal peace, strong democracies, social market systems that avoid a US-style underclass, strong scientific and technological capacity, high educational attainments, generosity in aid given to the low-income world compared with aid given by other high-income countries, a proclivity to negotiate rather than to bomb, the highest life expectancy and lowest child mortality of any world region, impressive commitments to alternative energy and energy efficiency, high environmental awareness, ample leisure time for the broad population, and the stabilisation of the overall population, not to mention very high levels of self-reported life satisfaction in world surveys?"

China uses its accumulated reserves to restart growth decisively. If this shift from export led growth to a high emphasis on domestic investment and finally domestic consumption works and if China tackles its environmental problems and hidden unemployment it could emerge as a winner of the crisis.

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