

Unit V 19: The financial crisis 2008-2009

1. Summary

In ► Unit V18: "Financial Bubbles and Overproduction Crises," we looked at more distant financial crises. This text is about the lessons of the 2008-2009 financial crisis.

2. The 2008-2009 Financial Crisis

Like probably no other crisis in recent times, the financial and global economic crisis of 2008-2009 has preoccupied ordinary people. But what actually happened during it?

2.1 How it all began

Low mortgage rates led to an increasing number of homeowners in the USA in the 1990s and early 21st century. This development, supported by the US government, caused a growing share of so-called "subprime" borrowers, i.e. homeowners with poor credit ratings. Negligent lending policies created a surge in demand for home loans and mortgages. Most mortgages contained a variable interest rate, which immediately increased as interest rates rose. Other mortgages contained low initial interest rates that increased with the length of the mortgage.

After the attacks of September 11, 2001, central banks around the world pursued a policy of cheap money to stimulate consumption and the economy. As a result of increased inflation, key interest rates were then gradually raised (Bloss et al. 2009:43).

As long as land and real estate prices increased, homeowners could increase their mortgage because the theoretical value of the property naturally increased as well. Many homeowners increased their mortgage in the expectation that prices would continue to rise and that they could easily resell their home at any time. They invested the extra money obtained by increasing the mortgage in consumption.

2.2 The Bursting of the Real Estate Bubble and its Consequences

When the real estate bubble burst and prices started to fall instead of rising, this led to a growing over-indebtedness of the properties: It was not uncommon for their (theoretical) value to fall below the value of the mortgage taken out. As a result of the recession, many Americans lost their jobs and could no longer service the mortgage. Many homes went into foreclosure, causing prices to fall further. In March 2010, the mortgage debt of 11 million households in the USA exceeded the value of their home. President Barack Obama was required in March 2010 to give those banks participating in the government's \$50 billion 2009 bailout program for over-indebted homeowners an additional incentive for a partial write-off for that portion of mortgages that exceeded 115% of a property's value. Depending on the degree of over-indebtedness, banks received 10 to 21 cents for every dollar of debt they forgave for homeowners. If a bank wrote off at least 10% of the mortgage debt, it could insure the remaining loan against default up to a maximum of 97.75% of the market value with the Federal Housing Administration (Neue Zürcher Zeitung, 3/27/28/2010b:33).

Banks were making losses and the default rate of borrowers in the U.S. reached a record high in the spring of 2007. "In June 2007, Bear Stearns announced that deposits at two of its hedge funds had fallen from \$1.5 billion at the end of 2006 to almost zero. The funds were thus effectively insolvent. In the U.S., a number of mostly mid-sized construction lenders filed for protection from creditors during this period" (Bloss et al 2009:3).

An important factor in the spread of the subprime crisis to the global financial market was the securitization of subprime mortgage loans: Banks invented a new investment vehicle in the form of securitization.

These securities, called **mortgage-backed securities (MBS)** and **asset-backed securities (ABS)**, in the form of securitized mortgage loans were combined into funds called **collateralized mortgage obligations (CMOs)**, whose shares were sold to a wide variety of investors worldwide, including mutual funds, hedge funds, insurance companies, pension funds, and investment banks.

According to Brunetti (2010:51), the following regulatory shortcomings amplified the effects of the mortgage crisis in the U.S.: first, mortgage lenders could resell the entire loan and did not have to keep the associated risks on their balance sheet; second, borrowers* could get rid of all obligations when they returned the house (cue: jingle mail); third, the investment banks could outsource the high-risk investments to subsidiaries; and fourth, rating agencies got paid by the investment banks for the ratings of complicated structured products, which did not exactly facilitate a neutral analysis.

With the advent of this new investment tool, the rating agencies failed: they played a key role in the subprime crisis. Because most securitization packages contained one or two prime mortgages, while the rest consisted of high-risk loans, the securitization securities were given a prime rating, but this in no way reflected their effective value or risk content. The good rating was given because it was assumed that a default of a large part of the loans was unlikely, since sufficient collateral was available in the form of the real estate. Bloss et al. (2009:3/4) suggest that the faulty rating can be explained by "a misapplication of the external rating, conflicts of interest, lack of competition, and the lack of liability of rating agencies."

In the course of the crisis, balance sheets changed and thus the equity cover of the banks decreased. The resulting loss of confidence led individual banks to hoard liquidity.

The banks lost all trust in each other. Starting with the collapse of Lehman Brothers, which at the same time acted as a trigger and catalyst for the crisis, all interbank trading came to a virtual standstill. Banks hoarded their own liquidity and stopped passing it on. A downward spiral ensued (see Brunetti 2011:64/65).

To stop this spiral, national banks were forced to provide massive amounts of liquidity.

In order to maintain the stability of the financial system, central banks intervened worldwide from summer 2007 by providing short-term funds. The provision of liquidity only eased the situation in the short term. At the end of 2007, central banks had to massively expand their

activities. Only gradually did the money market regain momentum, and confidence among banks increased again.

Starting with the subprime crisis in the US real estate sector, the crisis rapidly developed into an international financial crisis which also began to affect the real economy from the 4th quarter of 2008 at the latest. After the global write-off of more than US\$ 1000 billion, banks no longer trusted each other. They no longer provided each other with sufficient liquidity in the interbank market, which is why the central banks had to step in with strong and repeated liquidity injections. At the same time, credit to private and corporate customers was restricted, with the result that a whole number of corporate customers ran into credit difficulties on top of the recession-related drop in demand.

According to agency reports, national banks pumped more than \$4 trillion into national monetary circuits in 2008, with another \$6 trillion to come, according to experts (Broer in Zeit-Fragen, Jan. 12, 2009b). Together, however, this was only one-fifth of the assets destroyed or money supply reduced by the crisis in 2008.

When Lehman Brothers went bust in September 2008, the financial markets reacted with panic. In a concerted effort to regain the confidence of financial players, central banks cut key interest rates worldwide in a historically unprecedented move.

By providing direct central bank credit, national banks sought to replace the lack of interbank credit. In the U.S., the liquidity provided increased from \$907 billion on September 10, 2008, to \$1,754 billion on October 15, 2008. In the euro area, the liquidity provided by the European Central Bank grew from €477 billion to €759 billion in one month (Bloss et al. 2009:44).

Due to the liquidity injections into the interbank market, the balance sheet volume of the national banks increased massively. For example, the balance sheet volume of the U.S. Federal Reserve increased by 150% in 2008 (Neue Zürcher Zeitung, Feb. 14/15, 2009).

But it was already apparent in the fall of 2009 that the ECB's inflated balance sheet total was already declining significantly: Between January 9, 2009 and mid-September 2009, for example, the European Central Bank's balance sheet total declined from €1723 billion to €1480 billion, a reduction of more than 14%. However, it should be recalled that between June 2007 and January 2009, the ECB's total assets had grown by a whopping 88%.

The commercial banks were over-indebted. They could no longer meet their obligations without help from the state. Across Europe, governments had to inject 1.6 trillion euros - that is, 1,600,000,000 euros written out - into the banks to prevent them from collapsing (see Aebersold Szalay in *Neue Zürcher Zeitung*, 20.12.2016:12). If the state had not intervened in this situation, the banks would have had to go bankrupt, which would have led to unimaginable shocks in the banking and financial sector worldwide.

The banks were forced to take enormous write-downs because they themselves had invested in the subprime securities and were thus both investors and demanders of securitized securities. Moreover, the banks themselves carried out the securitization of the subprime products and provided partial collateral for investors in the event that borrowers defaulted. The banks themselves became victims of their own false expectations. The need for write-downs was enormous and the banks had to raise new capital (see Bloss et al. 2009:6).

Despite massive cuts in key interest rates, inflation rates in the USA and the euro zone fell significantly in the 4th quarter of 2008. This was due to the sharp fall in commodity prices - in particular the drop in oil prices - and falling domestic demand. As a result, liquidity pressure increased and real interest rates rose.

The financial and economic crisis was accompanied by a tremendous loss of investor confidence in the financial markets. In 2008, the stock markets experienced a mega stock crash of 50% and more (*Neue Zürcher Zeitung*, 6.1.2009a). The Swiss stock index SMI plummeted by almost 35% in the same year.

The Asian Development Bank (ADB) estimated that the assets destroyed worldwide in 2008 alone amounted to 50 trillion dollars, of which 9.6 trillion dollars were lost in Asia alone (Cash, 10.3.2009). With an estimated world population at the time of 7.5 billion people, this would mean that the per capita loss of assets worldwide amounted to \$6667 - an unimaginable sum.

In January 2009, the International Monetary Fund calculated a loss of US\$2.2 trillion in the international financial system (Bloss et al. 2009:8).

Due to the high volume of bank write-offs, the balance sheet totals of banks fell sharply. This led to a deleveraging effect, in which a large amount of debt capital is deleveraged. This hit banks with low equity buffers particularly hard. They were forced to sell assets below value and at the same time repay loans. As a result of the high risk premiums and high write-off volumes of securitized securities, 22 banks collapsed in November 2008 in the USA alone (Bloss et al. 2009:46). Many banks had to seek government assistance. German banks were also affected by the crisis, such as Hypo Real Estate, which had no direct customer deposits and therefore had to rely on loans in the interbank market. It had to book high losses and take advantage of government rescue packages. Switzerland's largest bank, UBS - whose total assets are roughly four times the size of Switzerland's entire gross domestic product - also had to take advantage of several dozen billion in government aid.

As a relief step for the affected banks, it was planned to set up so-called "bad banks" to which all toxic loans would be transferred. This would remove the bad loans from the banks' balance sheets and allow the banks to carry on as before. Economic historian Niall Ferguson commented, "The bad bank already exists. It's the Fed [i.e., the Federal Reserve, note CJ] that has been acting like a bad bank, especially since September 2008. Do we need another bad bank to take the pressure off the Fed so that it's not too obvious that the Fed has become a dumping ground for toxic paper? The problem with a separate bad bank is the issue of valuing the paper it would buy. No one knows what these papers are worth anymore. If the banks are effectively insolvent, then they had better be transferred to state ownership" (quoted from Leuschel/Vogt 2009:84).

2.3 The effects in the real economy

In the real economy, output also declined - with a slight delay - along with the banking crisis: it was stable until 2008, with world trade declining by 5% between 2006 and 2008 (Bloss et al. 2009:46).

From the 4th quarter of 2008 at the latest, the financial crisis also had an impact on the real economy. In March 2009, for example, the International Monetary Fund (IMF) forecast a decline in global output of 0.5 to 1% for the current year. This would mean that the global economy would not grow for the first time in 6 years (Neue Luzerner Zeitung and Cash, March 20, 2009). For the USA, the IMF forecast a decline of 2.6% and for the euro zone a minus of 3.2% for 2009. For the world's second largest economy, Japan, the IMF even expected a decline of 5.8%. Only for the emerging markets did the IMF forecast growth of 1.5 to 2.5% in 2009. The global slump in production in spring 2009 is reflected in the following figures. Extrapolating from the production losses in the month of February 2009, The Privateer (No. 624/March 2009, quoted from Zeit-Fragen of March 16, 2009:4) calculated the following production losses for the whole year:

Country	Production decline in %.
Taiwan	- 43%
Ukraine	- 43%
Japan	- 30%
Singapore	- 29%
Hungary	- 23%
Sweden	- 20%
(South)Korea	- 19%
Turkey	- 18%
Russia	- 16%
Spain	- 15%
Poland	- 15%
Brazil	- 15%
Italy	- 14%
China	- 12%
Germany	- 12%
France	- 11%
USA	- 10%
Great Britain	- 9%

But it was not only demand for consumer and capital goods that slumped in the second half of 2008. Commodity prices also fell massively, for example the price of oil. When exports of consumer goods collapsed, China, which analysts believe was largely responsible for the rally on the commodities market (see Neue Zürcher Zeitung, January 6, 2009b), also suddenly needed significantly fewer raw materials.

Global trade also declined significantly in the wake of the financial crisis. In 2009, exports in the industrialized countries contracted as follows as a result of the slump in demand:

Country	Decline in exports	In absolute terms
Japan	- 24,9%	
EU	- 14,8%	
USA	- 13,9%	
China	- 10,5%	
Asia total	- 11,1%	
South and Central America	- 5,7%	
Africa	- 5,6%	
Trade in goods worldwide	- 23%	- 12,15 bn \$
Trade in services worldwide	- 13%	- 3,31 bn \$
Total	- 12,2%	

Source: Neue Zürcher Zeitung vom 27./28.3.2010a:33.

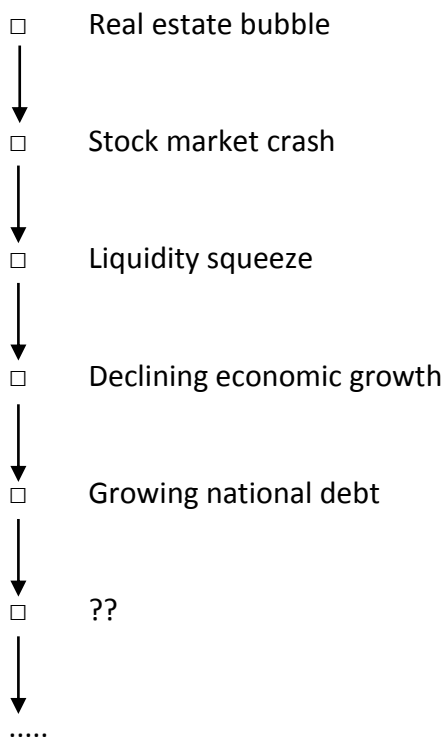
Following the collapse in demand in the real economy, many governments hastily adopted so-called economic stimulus packages to stabilize demand.

The government stimulus and support programs were surprisingly ineffective, at least initially, despite their unprecedented scope. In the U.S., for example, the Troubled Assets Relief Program (TARP), launched in September 2008, originally planned to invest a staggering \$700 billion in the purchase of distressed securities backed by mortgages of some kind. This was intended on the one hand to help homeowners threatened with eviction and on the other to prevent a further slump in consumer demand.

The long-term effects of the multi-billion economic stimulus packages, especially in the area of state budgets, were not yet foreseeable at all. From today's perspective - more than 13

years after the financial crisis - it can be said that the effects of the financial crisis have still not been overcome: Rock-bottom and negative interest rates (see ► Unit V 26: "The Interest Rate Problem"), flooding of financial markets with massive liquidity ("quantitative easing") and negative inflation figures for several years were direct and indirect consequences of the financial crisis.

According to Bloss et al. (2009:42, supplemented by CJ), the course of the 2008-2009 financial crisis can be depicted as follows:



According to Gerhard (2016:27), the financial crisis was also an expression of a "crisis of morality in our economy," which manifested itself in the following practices, among others:

- unfair, manipulative, and fraudulent conduct by U.S. mortgage lenders;
- misadvising customers in the securities area;
- manipulative setting of reference interest rates in the Libor and Euribor areas;
- accounting abuses, etc.

Tobias Graf von Bernstorff (2016:76) has asked the following questions with regard to recent developments in finance: "Who controls whom? Does money control our actions, or do we

control money? Are we guided by greed to generate more and more money, or do we determine how we generate money and for what purpose we do so?" Conclusion: the ethical-moral questions in connection with the financial crisis are not exhausted by the (possible) misconduct of individual bankers, but the entire economic and financial system must be analyzed against the background of basic ethical-moral questions and, if necessary, changed.

Comparing the effects of the 2008-2009 financial crisis with the economic crisis in the 1920s and with the Japanese crisis (cf. ► Unit V 18: "Financial Bubbles and Overproduction Crises"), the following picture emerges: In terms of the sequence of events, the trigger and the transition to the real economy, the Japan crisis can be compared with the current crisis. However, there are differences in the further course: "In the run-up to all [three] crises, an excessively lax monetary and fiscal policy followed by a speculative bubble on the real estate or stock market can be identified. In all three cases examined, low interest rate policies fed risky transactions and, when interest rates subsequently rose, created the basis for the bursting of the speculative bubbles. The clearest comparison between the Japan crisis and the current crisis is with respect to lending behavior. The default of 'bad' loans puts the financial economy in massive distress and subsequently drags the real economy, via liquidity, into the crisis. The world economic crisis of 1929 is an exception, also due to the historically determined framework conditions. Here, the crisis did not originate in the financial sector, as is often assumed, but in the real economy. He st by massive overproduction and overvaluation in industry, the financial economy was severely affected. However, as the crisis progressed and spread to all industries, it showed similarities to the current crisis. In all three crises, lack of liquidity is the central point of transition of the crisis to the real economy. Bank failures and increased distrust in lending cause refinancing costs to rise disproportionately, and this causes difficulties for the entire economy. In the case of Japan and the global economic crisis of 2008-2009, the signs in the real economy can initially be seen in large-scale industry, which is heavily dependent on exports. However, differences are also evident here, as in Japan, large companies were mainly negatively affected by yen appreciation rather than recessionary target countries" (Bloss et al. 2009:55, lightly edited by CJ). In 1929, mainly the agricultural economy and domestic industrial production were affected: Overproduction and falling domestic demand worsened yield conditions. At that

time, world trade and exports played a smaller role compared to today. But even in 1929, the auto industry played a central role. Deflationary developments occurred in both the 1920s crisis and the Japan crisis.

In the 1920s and 1930s, more than 10,000 banks went bankrupt worldwide. Even if we are far from that number today, we have to keep in mind that today the financial sector is dominated by a few financial giants - and a large part of them needed massive government support to avoid going bankrupt. From 1929 - 1933, the Dow Jones fell 85%. It did not return to the level of late summer 1929 until the 1950's. In the economic crisis of 2008/2009, individual stock indices lost between 30 and 50%.

During the Great Depression of 1929 - 1933, unemployment rose to 44.7% in Germany, 31% in the U.S. and 23.2% in England (Broer in Zeit-Fragen, Jan. 12, 2009b). In contrast, the increase in unemployment during the 2008-2009 financial crisis was much lower. While at the beginning of 2008 the official unemployment rate in the euro zone averaged 7.5%, in September 2009 the unemployment rate was expected to average 11.5% in 2010 (Cordonnier in Le Monde Diplomatique, Sept. 2009a). According to estimates by the International Labor Organization (ILO), the economic and financial crisis is estimated to have created an additional 39-59 million unemployed worldwide, as well as 200 million workers earning less than two dollars a day (Cordonnier in Le Monde Diplomatique, Sept. 2009a).

In contrast to the crisis in the 1920s and 1930s, when all states kept the money supply in circulation stable or even reduced it, national banks pumped thousands of billions of dollars into the monetary cycle during and after the 2008 financial crisis.

2.4 Explanatory models and perspectives

Bloss et al. (2009:115ff) have attempted to use the two main theories of economics, namely the classical/neo-classical approach of Adam Smith and the demand-side approach of John Maynard Keynes to explain the 2008 - 2009 financial crisis. While the classics believe in the self-healing powers of the market and reject government intervention in the economy, Keynes emphasized the importance of government intervention that increases economic

demand. Keynes fundamentally challenged the theory that every supply creates its demand. In his view, there is effective demand, which comprises the aggregate demand for goods in an economy that has purchasing power. Or, to put it another way, effective demand consists of domestic demand for consumer and capital goods as well as demand from abroad.

In contrast to sales-oriented ideas, which see their salvation in lowering the price on the supply side, Keynes assumes that sales and thus production are determined from the demand side. When demand falls, production is curtailed, leading to falling incomes and further falling demand until an "underemployment equilibrium" is reached. Investment is the second component of effective demand. According to Keynes - and in contrast to classical neoclassical ideas - investment decisions are not based exclusively on the present marginal productivity of capital, but equally on the expected future returns to capital. In this context, an investor will only make his investment if the marginal productivity of capital is higher than the market interest rate for a bank loan. Thus, the investment decision depends on the market interest rate (cf. Bloss et al 2009:105).

The classical/neo-classical approach sees only production-related technical progress, i.e. input-related technical progress, as such. In other words, a higher output can be produced with the same factor input. Production-technical progress does not exist in this view. Production advances arise from three types of increased release of factors of production, namely increased release of labor and capital, release of capital, and release exclusively of labor (Bloss et al. 2009:117).

While in the classical/neo-classical view, due to the input and supply orientation, an active monetary policy is not only considered ineffective in terms of employment policy but even inflationary, in the eyes of Keynesians the state can increase demand, for example, through infrastructure programs and generally by increasing the expenditure side in budget policy, thus counteracting the economic crisis.

Economist Mascha Madörin rightly pointed out (in the WochenZeitung of March 5, 2009) that Keynes - whose demand-oriented approach is experiencing a renaissance today - did not argue against the backdrop of a globalized economy and a globally interconnected

financial system, but with a view to national economic systems. If demand collapses in almost all countries at the same time, he argued - not as in the case of Japan - exports can no longer play the stimulating role for demand. The only growth sectors, he said, are health care, education and the environment. It should be borne in mind, however, that economic stimulus programs do not work in times of structural crisis (cf. Zinn in *Le Monde Diplomatique*, July 2009:10).

However, it could be argued here that only a fundamentally new innovation cycle, for example in the energy sector, could reverse the recessionary decline in demand in the investment and consumption sectors. The fact that this negative cycle was evidently far from being halted in March 2009 was evident from the development of stock market prices: On March 2, 2009, the German stock market index fell to its lowest level in four and a half years, dropping below the 3800-point mark. The Swiss stock market index lost 5.4% and fell to 4438 points, the same level as in April 2003. Things were even worse in the USA: The S&P 500 index fell below 740, the same level as in 1997.

After March 2009, the situation on the stock market improved markedly: Between March 9, 2009 - the low point of the stock indices - and mid-September 2009, the stock markets of the industrialized countries rose by more than 50% and those of the emerging countries by as much as more than 70% (see *Neue Züricher Zeitung*, September 12/13, 2009b). However, it was not clear for a long time whether this merely signaled a kind of interim high or whether the upswing was already sustainable.

Although - as already mentioned - stock market prices improved significantly in the further course of 2009 and beyond, and real output also picked up again in most countries, the long-term impact of the financial crisis is still difficult to assess - especially with regard to later crises such as the Corona pandemic in 2020/2021.

Surprisingly, the activism of governments and national banks during and after the financial crisis was limited to more or less hastily adopted emergency measures, without reflecting on the need for a fundamental restructuring of the global financial system. Many bankers and

politicians assumed - and not entirely wrongly - that after the economic crisis everything would continue as before.

Nevertheless, the following problems or even potential time bombs in the economic and financial system remained:

- **Loans that could no longer be repaid:** According to estimates by the European Central Bank ECB, credit losses of 284 billion euros had to be expected in September 2009. These losses affected both personal loans and corporate loans (see Cordonnier in Le Monde Diplomatique, Sept. 2009a).
- **Possible crash on the bond market:** It is a matter of time before investors are no longer willing to invest in government bonds, especially if further states become insolvent as a result of the enormous debt burden. One example is the bankruptcy of the U.S. economic powerhouse California. It is enough, however, that if inflation rises above 5%, investors will flee government bonds due to the monetary glut. According to Joachim Starbatty (in Neue Zürcher Zeitung, 3.10.2009b), the most dangerous bubble - that of government bonds - would then burst, leading to huge losses for investors.
- **Pension funds and old-age pension institutions** are also threatened with debacles: Apart from the losses on the stock markets, a not inconsiderable number of pension funds suffer from missing or delayed payments by companies and state administrations. For two decades, for example, politicians did not make payments to the pension funds of public employees, although this was required by law (see Cordonnier in Le Monde Diplomatique, Sept. 2009a). As a result, these funds were chronically plundered and remain underfunded to this day.
- **Bundled IOUs for derivatives:** Another house of cards that threatens to collapse at some point is represented by the bundled IOUs that have been run up in the derivatives market. According to Cordonnier (in Le Monde Diplomatique, Sept. 2009a), some \$3500 billion could be lost in the process, again as much as in the original mortgage crisis.
- **Lump-sum risk of asset funds, pension funds and insurance companies:** Asset funds, pension funds and insurance companies are among the biggest players in the investment business today. According to Cordonnier (in Le Monde Diplomatique,

Sept. 2009a), "they deliberately influence the top management of companies and arrogate to themselves the role of a kind of 'stock market police.' They punish companies that do not put shareholder interest (shareholder value) at the center of all decisions and, conversely, reward those that manage to generate the famous 15 or 25 percent profit on equity." Especially through the new investment strategies and forms, such as private equity funds, they put entire companies under pressure. As a result, on the one hand, innovative but perhaps not so profitable projects in the short and medium term are being scaled back, while on the other hand, pressure on salaries and wages, and indeed general cost pressure in general, is increasing. This creates - especially in the case of pension funds - the paradoxical situation that, on the one hand, they maximize corporate profits at the expense of wages, but on the other hand, they put their actual "owners," i.e., the working population and - secondarily - retirees, under ever-increasing pressure, because allegedly the targeted return is not being provided, especially in times of economic crisis.

- **Growing public debt:** In view of the government aid packages to the economy, the national debt is growing immeasurably. More and more countries already have or soon expect to have public debt of 80%, 100% or more than 100% of gross domestic product.
- **Money glut:** At the same time, there is a growing money glut worldwide: In 1980, according to the OECD, banks, pension funds and insurance companies managed assets of \$5 trillion. In 2005, the figure was already \$55 trillion (Herrmann in Le Monde Diplomatique, September 2009b). This means two things: On the one hand, it is becoming increasingly difficult to invest money lucratively. This means that speculative investment vehicles are increasingly in demand and that further speculative bubbles will occur in the foreseeable future. On the other hand, the risk of inflation is rising. Both - i.e. the bursting of speculative bubbles and inflation - will primarily hit small and medium-sized savers, which is why the ongoing redistribution of wealth to the rich will intensify further. In addition, pressure on wages will continue to increase.
- **Possible bubble formation in government bonds:** In 2009, the International Monetary Fund (IMF) examined the medium-term consequences of 88 banking crises over the past 40 years. It found that, as a rule, the collapses could not be made good

in the following 2-3 years. Although growth rates returned to their previous levels after four to eight years, however, economic output remained on average below the level achieved without a crisis (Neue Zürcher Zeitung, Oct. 3, 2009a). The study also found that the greater the slump in the first year of the crisis, the greater the loss even after seven years. Moreover, countries with above-average investment rates suffered above-average setbacks during the crisis. Interestingly, the IMF found no differences between rich and poor countries in terms of the impact of banking crises.

- **New real estate crisis in commercial real estate:** In 2010, the real estate crisis - and apparently also the financial crisis - was not yet over in the USA. According to a report by the Congressional Oversight Panel (COP), in spring 2010 there were liabilities - i.e. loans and derivatives) of US \$3400 billion in the commercial real estate market in the USA. That was about 7% of the total market in outstanding loans. Between 2010 and 2014 alone, US \$1400 billion of that would come due. If one takes into account. That in almost 50% of commercial properties the real estate value was less than the loans on it, one can imagine the large write-offs that had occurred as a result. In 2010, the banks were expected to lose 200 to 300 billion US \$ (Neue Zürcher Zeitung, 22.2.2010b). Not without reason, the Neue Zürcher Zeitung (of 22.2.2010b) entitled its report on this situation "Smoldering fire in the US real estate market". The two largest real estate financiers in the U.S., Fannie Mae and Freddy Mac - which were the first financing institutions to receive government support in the context of the real estate crisis - were also in no way out of the mess in spring 2010: The Association of U.S. Mortgage Bankers estimated that Fannie Mae would see up to 6% and Freddie Mac up to 5% of their mortgages default by 2012 (Timiraos/Hagerty in Schweizerische Handelszeitung, 17.-23.2.2010).

3. Control Questions

1. How did the 2008-2009 financial crisis begin?
2. What role did mortgage securitization play?
3. Why was the U.S. mortgage crisis able to spread so quickly to global financial markets?

4. What role did the rating agencies play?
5. What did the insolvency of Lehman Brothers mean?
6. Why did central banks in most countries have to inject enormous amounts of liquidity?
7. What was the impact of the financial crisis on the real economy?
8. Explain the differences between the classical-neoclassical and the Keynesian approach.
9. What open problems or even time bombs did the financial crisis leave behind?

4. Links

Verlauf der Finanzkrise

Entstehungsgründe, Verlauf und Gegenmaßnahmen

Analyse der Wissenschaftlichen Dienste des Deutschen Bundestags

http://www.ags-hamburg-mitte.de/pdf/Wirtschafts_und_Finanzkrise.pdf

Chronologie der Finanzkrise

<http://www.fuw.ch/article/chronologie-der-finanzkrise/>

Finanzkrise: Warum Lehman wirklich unterging

<http://www.nzz.ch/wirtschaft/wirtschaftspolitik/finanzkrise-warum-lehman-wirklich-unterging-ld.107906>

London zittert vor Finanzkrise 2.0

<https://www.teleboerse.de/fonds/London-zittert-vor-einer-Finanzkrise-2-0-article18134876.html>

„Die Finanzkrise meistern - Wachstumskräfte stärken“

Verschiedene Gutachten des Sachverständigenrats zur Begutachtung der gesamtwirtschaftlichen Entwicklung: Buchhinweis

https://www.sachverstaendigenrat-wirtschaft.de/fileadmin/dateiablage/download/gutachten/ga08_ges.pdf

5. Cited literature and further readings

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