Unit V 26: The interest rate problem

1. Summary

The taking of interest was forbidden in the Christian world for many years. Interest was considered an impermissible form of usury. Due to its enormous accumulation effect (compound interest), interest is responsible for the explosion of monetary and financial assets. High interest rates can lead - with a time lag via economic braking effects - to growing unemployment. The role of interest rates has been viewed very differently and sometimes controversially by different economic approaches. While today's dominant approaches of classical-neoclassical economics and Keynesianism tend to see interest as a necessary evil, free economists and related currents regard interest as the cause of (almost) all evil.

2. The Role of Interest in the Past and Today

Thomas Aquinas justified the prohibition of interest with the sentence: "Money does not give birth to money" (Wielens 2004:24). In 825, Emperor Lothar decreed, "Whoever takes interest shall be banished by the king; whoever repeatedly takes interest shall be expelled from the church and shall be imprisoned by the count" (Wielens 2004:24). The Lateran Council held in 1139: "Whoever takes interest shall be expelled from the church and shall be readmitted only after the strictest penance and with the greatest caution. An interest taker who dies without conversion is to be denied Christian burial" (quoted in Hannich 2002:33). And Pope Alexander III issued the following decree in the 2nd half of the 12th century: "Any legislation that permits interest is null and void" (Wielens 2004:24). With so many and unambiguous statements of the Christian Church on the prohibition of interest, it is quite surprising that 700 years later interest was completely accepted in the Catholic Church and the prohibition of interest was no longer an issue at all.

One problem with interest is that due to compound interest, the amount of money earning interest does not grow linearly, but as a power. Since World War II, the amounts of interest - and logically, of course, on both the debt and income sides - have exploded:

Germany: Comparison of interest flows in DM billion, old federal states							
	1950	1960	1970	1980	1990	1993	Anstieg
Financial assets	59	337	926	2390	4828	5829	x 99
Debt	66	303	852	2327	4325	5680	x 86
GDP or GNP	105	303	676	1485	2426	2820	x 27
Interest income of banks	3,0	12	49	172	335	490	x 163
Interest paid by banks	2,2	7	35	132	257	360	x 164

Source: Creutz 1994:225.

While the real gross national product in Germany grew from 100 to 160% between 1970 and 1993, interest rates increased tenfold in the same period, i.e. from 100 to 1000%. In the same period, net wages increased from 100 to 320% and nominal gross national product increased from 100 to 420% (Creutz 1994:228).

But the interest problem has not only a moral and a mathematical side, but also a practical one. Helmut Creutz (1994:362) and Günter Hannich (2002:48) have long pointed out that increasing bank interest rates usually lead to higher unemployment with a time lag of one to two years: "Whenever there was an increase in interest rates, the interest burdens of entrepreneurs rose and rationalization measures were taken. This was the case in the periods 1970-1974, 1978-1981 and 1986-1992, when unemployment rose sharply in each case. When the interest rate fell again, shortage employment stabilized at the level reached or fell slightly" (Hannich 2002:48).

Helmut Creutz (1994:362) writes: "Two to three years after the rise in interest rates, the trend in unemployment also shoots up. If the rise in interest rates stops, this is also the case for unemployment one to two years later." Likewise, the number of corporate bankruptcies increases after interest rates rise, while it decreases after interest rates fall. But this correlation is hardly surprising: Because borrowed capital is more expensive when interest rates are high, and because high interest rates coincide with falling demand once the peak in

the business cycle has been passed, it stands to reason that most companies then run into difficulties. The same mechanism plays out with respect to unemployment: low interest rates mean cheaper capital and thus lower costs. Cheaper capital leads to increased debt - e.g. in the form of consumer loans or leases - which increases demand. Conversely, it is not for nothing that central banks raise key interest rates when the economy is overheated. Overheated economic activity often leads to a bubble forming and, sooner or later, to the bubble bursting. In other words, rising demand leads to higher prices, people invest in real estate, for example, thinking that prices will continue to rise and they will be able to sell their property at a later date at a higher price, after which they will invest their profit in increased consumption or a larger villa, etc. At some point - such as in the real estate crisis of 2008 - the bubble bursts and interest rates fall. Businesses cut back production and unemployment rises.

2.1 A Basic Understanding of Interest Rates

Case study: The dead horse
Young Chuck wants to get rich with his own ranch. At the beginning he buys a horse from a farmer. He gives the farmer all the $100 he has saved and the farmer promises to deliver the horse to him the next day. The next day, the farmer comes by and tells Chuck some bad news:
"I'm sorry, kid, but the animal dropped dead during the night" Chuck says: "No problem. Just give me my money back". "Can't do it", the farmer opens up to him. "I already spent the money on fertilizer yesterday". Chuck thinks about it for a moment. "Well then," he begins, "I'll take the dead beast anyway." "What for?" asks the farmer. "I want to raffle it off," Chuck explains to him.
"You can't raffle off a dead horse," the farmer marvels. But Chuck replies, "No problem! I just won't tell anyone it's dead already..." Months later, Chuck - dressed up in a suit and fancy shoes - and the farmer run into each other in town.
The farmer asks him, "Chuck! How did it go with the horse carcass raffle?" "Great," Chuck tells him. "I sold over 500 tickets at $2 each and made my first $1,000 profit." "Yeah...didn't you get any complaints?" "Sure there were - from the winner," Chuck says. "I then just gave him back his $2."
Today, Chuck sells structured financial products at Goldman Sachs.
Source: Humane Wirtschaft vom März/April 2009:48.

In the three economic schools that dominate today, interest is understood differently, but basically quite similarly. While **classical economics** sees interest as a temporary loss of profit on borrowed financial assets, **neo-classical economics** sees interest as a temporary loss of

consumption (Heinsohn/Steiger 2006:9). The third current, **Keynesianism**, views the loss of interest as a temporary loss of money: "In the classical view, interest compensates for the foregoing of profit opportunity, taking into account the risk involved. It arises when a 'money capitalist' does not take the risk of an 'entrepreneur capitalist' himself, but lends him money to invest in means of production. The interest rate is then the difference between the premium of the profit opportunity of the investment and the risk premium of the active entrepreneur. In neoclassicism, interest compensates for foregoing the consumption of present goods because, as not lent, they carry a higher premium than the consumption of future goods. In Keynesianism, interest compensates for the foregone liquidity premium of money. Here, the premium of money means the potency of money to service claims at any time" (Heinsohn/Steiger 2006:10/11). Or in the words of Keynes (2006:142), "Since the rate of interest is the reward for giving up liquidity, it is thus at all times a measure of the reluctance of those who possess money to part with the liquid disposal of it. The interest rate is not the 'price' that balances the demand for funds for investment with the willingness to abstain from current consumption. It is the 'price' that balances the desire to hold wealth in the form of cash with the available quantity of cash."

However, Keynes thought further. Keynes (see Zinn in Le Monde Diplomatique, July 2009:10) was convinced that developed capitalist economies would not grow indefinitely. In his outlook for the year 2030, two points were important for Keynes: Provided that no further war would take place, Keynes considered growing average income and growing productivity to be the key factors for a "golden future" (cf. Zinn in Le Monde Diplomatique of July 2009:11).

Keynes believed that future economic policy had to go in three directions: First, the pursuit of an even distribution of income, second, an increase in the state share and third, a gradual reduction in working hours (cf. Zinn in Le Monde Diplomatique, July 2009:11).

In contrast to Keynes, the proponents of property economics believe that interest is neither compensation for foregone profit or consumption, nor compensation for the temporary loss of liquidity. Heinsohn and Steiger (2006:11), on the other hand, speak of a "money creation rate." In their opinion, interest does not arise when money is lent on, but when money is

created (Heinsohn/Steiger 2006:98). Therefore, in economic theory, the interest compensates for the loss of the property premium of the money-creating creditor (Heinsohn/Steiger 2006:99).

The property economics approach distinguishes ownership and property as a central paradigm: While according to Heinsohn/Steiger (2006:13ff.) ownership simply means the more or less arbitrary availability of material goods and the use of goods and resources via existing chains of command or systems of power, according to this approach property systems are characterized as a community of freemen, which replaces earlier sets of rules of custom or arbitrariness of ownership by legally effective contracts. While tribal societies, feudal societies, or state socialist systems are characterized by pure command structures, the property society controls "production, distribution, consumption, and accumulation through what is not present in the other two systems: encumberable and pawnable property, interest, and money" (Heinsohn/Steiger 2006:13).

However, it could be objected to Heinsohn and Steiger (2006:27) that feudal society certainly knew legal regulations of property management: Thus, rent was ultimately nothing more than a kind of interest on the transfer of the rights of use of the land to the tenant. While it is true that peasants in feudal society were not, as a rule, "freemen," this does not change the fact that feudal lords certainly also granted and enforced property use rights. Conversely, citizens in state socialist societies were certainly formally free, but often lacked the de facto means to enforce property rights. But this is also the case in so-called property societies, for example when it comes to expropriation and nationalization of property - which can happen more or less frequently depending on the extent of state regulation in a society. Hence, the distinction between "property systems with mere reproduction" and "property societies with economy" (Heinsohn/Steiger 2006:26ff) is neither conceptually clean nor empirically tenable.

Nevertheless, the distinction between possession and ownership in the sense of Heinsohn/Steiger (2009) is interesting: possession is understood as the de facto use of a resource or good, ownership, however, as the right to dispose of the use. Whereas the possession of goods and resources can only be controlled - and the good or resource

consumed - the possession in a property order is forced into management. In this context, goods in a property order always have a "usable property side" and a "burdenable property side" (Heinsohn/Steiger 2006:24). Indispensable conditions for a property order are freedom and the rule of law. Property is created by a legal act: "Immediately with the creation of property titles out of nothing, they throw off the property premium. This - unlike interest or profit - does not have to be earned" (Heinsohn/Steiger 2006:87). Property titles are not a substitute for possession titles, but a supplement: they "transform ... traditional rules of possession into rights from possession that are now also justiciable" (Heinsohn/Steiger 2006:87). Unlike possession, property cannot be tasted, heard, smelled or touched.

Günter Hannich (2002:57) has pointed out that there are four types of interest:

- Interest from government debt: It is collected through taxes and other levies.
- Interest from corporate debt: This is paid out in the form of stock dividends and interest on shareholdings and is passed on to the prices of the products or services produced by the company in question.
- Interest from private debt: These are charged to the debtor as a markup (interest on loans).
- Indirect interest charges: According to Hannich (2002:57), these are charged as interest on physical capital and passed on to consumers as a component of prices.

The question arises, however, as to whether this breakdown is conceptually correct: The first three forms of debt refer to different economic agents, namely public households, companies and private households. In all three cases, debt is used to pre-finance a service which is paid for at a higher price due to the subsequent payment (service costs + interest on the capital advanced). In the case of companies, the use of borrowed capital is worthwhile if the profits generated by it are greater than the costs incurred by borrowing (interest). In the case of private debt, the advanced enjoyment of a product is valued more highly than the additional costs (interest on the loan). Of course, it is true that the interest on the borrowed capital used - and, by the way, also on the equity capital! - can affect several levels of price calculation, namely when a product passes through several levels of production, e.g. at the level of raw material production (e.g. wood), processing (furniture, paper, etc.) and trade, etc. But these interests are each included in one of the first three levels of debt.

It is not true, however, when Hannich (2002:58) argues that a rent consists of over 80% interest. This would mean that the real value of the service received, namely the right to live in the rented dwelling, is effectively only 20% of the rent amount. One would have to argue the other way around: If someone were to build or buy a house with the same quality of living that they enjoy in their rental apartment, they would have to save the corresponding money or assets beforehand. Because incomes are low in relation to the main prices - an inexpensive single-family home in Switzerland costs about 10 - 15 annual wages of a median income - this takes 20 - 30 years at an unrealistically high savings rate of 50%. If one calculates with a savings rate of 25%, this time doubles. Therefore, the homeowner has to pre-finance a large part of the house costs through a loan, for example through a first and second mortgage. Let's assume he has Fr. 200'000 equity and takes out a mortgage of Fr. 600'000. Assuming he pays an average mortgage interest of 5%, the house costs increase by Fr. 30'000.- per year. If he does not pay off the mortgage, then the effectively paid house price increases in 20 years by Fr. 600'000.- mortgage interest; the house costs him therefore instead of 800'000.- full 1.4 million francs. This does not include the amortization or the necessary ongoing replacement investments. So the problem is not that interest has to be paid for borrowed capital, but that the debtors do not calculate correctly - or to put it another way: They estimate the utility value of the home too high. Or to put it still another way: the house is in fact too expensive in view of the equity or assets effectively available. Many people only compare the rent to be paid in a rented apartment with the mortgage interest of an owner-occupied home, forgetting that the owner-occupied home ties up enormous amounts of assets that are freely available in the case of a rented apartment. In addition, the sale price of the property in case of sale can be lower than the original purchase price.

It is true - as Creutz (1994:244) writes - that with a return on the capital invested in a property of say 5%, the entire price of the invested capital is paid again in 20 years. The only difference is that during these 20 years the investor cannot use the invested capital in any other way, he cannot consume it. Economists speak of opportunity costs in this context. The only thing he can consume is the interest. If the owner were to put this capital into a company he owns, he might earn much more with it, e.g. 15%, 20% or more. The lower

interest rate of an investment in real estate can be explained by the fact that this investment is relatively risk-free, whereas, for example, in the case of a start-up company, there is a considerable risk that the newly founded company will go bankrupt in the first five years.

But the property owner also bears a cost. A poorly maintained property loses a lot of value - and thus the relative interest rate increases even if rents remain the same. Here is an example: At the time of purchase, a 40 year old property with 3 apartments costs Fr. 600'000.-. The owner achieves rental income of - let's say - Fr. 30'000.- per year. Because the owner is afraid of the costs, he renounces all value-preserving renovations. The property is in a worse and worse condition. The rents remain the same in the 20 years after the purchase, but the value of the property decreases to - let's say - Fr. 400'000.- because of the omitted renovations. At the time of purchase, the gross yield was 5%. Twenty years later, the gross yield is 7.5%. The absurdity of the situation is that the less money the owner puts into the property, the higher the proportional return. However, the calculation is fictitious, because due to the increasing deterioration of the property, the standard of living decreases and thus the change of tenants probably increases, because the solvent tenants look for another place to live. Furthermore, the example is only valid if housing rents are stable or rising, i.e. if there is a shortage of housing. Otherwise, apartments would also decline as a result of the decay of the property. High gross yields - and thus high interest rates - on properties thus generally mean that the property is in need of refurbishment. Conversely, excessively low gross yields can be the result of overpriced construction costs for new properties: Because rents are usually not very elastic, or in other words, because excessive construction costs do not automatically mean higher housing standards, there are clear caps on rents in the housing market. The level of interest rates is thus often also an expression of the market in question - what price are demanders willing to pay for a product, and what price are they not?

The problem is that disproportionately high interest rates can either be a sign of a well-functioning market or an expression of a market that is out of balance: On the capital market, risky bonds yield high interest: e.g. government securities of highly indebted countries or venture capital for start-up companies. On the other hand, however, there are highly speculative forms of investment that gain popularity when other, reputable

investment vehicles yield no or only low interest. This is the case, for example, in times of excessive liquidity in the capital markets. Then, either the high-risk investors must be obliged to pay not only the excessive profits, but also the enormous losses themselves. Or the high-risk investment instruments must be banned. At present, however, financial institutions and banks make high-risk investments themselves, and when these go wrong, the state has to step in with billions in aid.

It is undoubtedly true that poor households or households close to poverty are increasingly unable to afford less and get into debt as the share of interest in gross domestic product grows (see Kremer 2012:178). This is because - unlike the better off - they have no income from savings and assets. For this reason, interest rates should be capped, for example at 5%. However, the maximum interest rate should depend on the market and interest rate environment.

Particularly from the free market side, the rampant interest rate problem is rightly pointed out. It is true that the interest component can make up a considerable part of the selling price of a product. If it is too high, this is neither healthy nor economically desirable. Silvio Gesell and the movement of free economists he founded therefore proposed to abolish interest in principle or even to replace it by a negative interest. This was intended to make hoarding money unattractive. One of Gesell's proposals was to make hoarding money unattractive by having the money continuously lose value ("fading money"). The idea was, for example, to continuously devalue banknotes by affixing a stamp to them every month. After one year, for example, a 100-euro bill would be worth only 95 euros, a year later only 90 euros, and so on. Every note owner would then try to get rid of the note as quickly as possible. This made sense as long as cash was the most important form of financial assets. As a result, its hoarding led to falling demand and thus to a deflationary trend: prices fell broadly and permanently. But Helmut Creutz (1994:139) has rightly pointed out that today hoarding money tends to lead to inflation because central banks are forced to replace money taken out of circulation and thus inflate the money supply.

In the 1930s, the municipality of Wörgl introduced a second, parallel circulating currency in addition to the official national currency. This currency lost 1% of its value every month and

followed Silvio Gesell's ideas about so-called "shrinkage money". The idea behind it was simple: to avoid as much as possible any loss of value of their money, the owners spent the money quickly instead of hoarding it in a bank because of the high interest yield of 8 - 12%. As a result, demand for goods and services increased and the local economy flourished, tax revenue increased and new jobs were created. For example, unemployment fell by 25% during the experiment from July 1932 to September 1933, and the municipality was able to invest in public works while putting the municipal budget in order (see Broer in Zeit-Fragen, Jan. 12, 2009a). This undisputed positive effect in Wörgl was essentially based on the fact that the faster circulation of money and the reduced attractiveness of saving (or hoarding) money increased the demand for consumer goods. This was, in effect, a kind of demand-driven stimulus program. Incidentally, in November 1933, following a decision by the Administrative Court in Vienna, the currency experiment in the Tyrolean municipality of Wörgl was judicially terminated.

But in principle, this is something similar to what the central banks of the U.S. and Western Europe are doing today through their policy of quantitative easing (QE): While in Wörgl the velocity of money in circulation was increased, the policy of QE increases the amount of money in circulation - and both increase - at least temporarily - the demand for products and services. But both are artificial - or if you like: spurious - forms of demand increase.

However, there are objections to Silvio Gesell's "shrinkage money theory": Silvio Gesell developed the idea of shrinkage money primarily against the hoarding of cash. However, it should be borne in mind that only a small proportion of money circulates as cash. In Switzerland, for example, only just 15.9% of assets were held in cash in 2008 (Schweizerische Handelszeitung, March 24-30, 2010). In contrast to cash, money invested with banks should, in Gesell's opinion, retain 100% of its value.

The shrinkage money idea should also be countered by the fact that hoarding cash is only a problem in times of high deflation - and as is well known, there have been virtually no prolonged periods of deflation anywhere in the last 60 years - if one disregards Japan after the 1989 to 2009 crash. However, this seems to have changed in the aftermath of the 2008/2009 financial crisis and the euro crisis since 2011/2012 in Europe. Quite a few

economists believe that only the flooding of the markets with liquidity and the enormous expansion of the money supply in the U.S. and especially in Europe have prevented a deepening deflation. In 2015, for example, there was serious discussion of imposing a fee on the holding of cash - to prevent individuals or institutional investors from avoiding the negative interest rate charged by banks by holding large amounts of cash. The abolition of cash was even proposed as a radical solution. In 2015, for example, the abolition of cash and the exclusive admission of electronic means of payment was discussed as an option (see Uhlig in Neue Zürcher Zeitung, April 27, 2015:21), so that savers and also institutional investors such as pension funds could no longer avoid the government-decreed loss in value of their assets by hoarding cash. This would not only have meant a massive restriction of personal freedom, but would also have opened the door to state control and monitoring of all private economic transactions. The only sensible alternative was and is a massive reduction of the quantitative money surplus by the national banks, even if this should lead to prolonged deflation. Otherwise, an uncontrolled collapse of the entire financial and economic system with the loss of large parts of the saved assets is imminent at some point.

Another argument against the shrinkage money idea is the fact that increasing the velocity of circulation leads to more inflation. While, on the one hand, in a fiat money system, cash continuously and deliberately loses value artificially, there is an additional loss of value in money in that the increased velocity of circulation of cash increases inflationary pressures, which further devalues money and additionally increases the prices of goods and services.

Following on from the shrinkage money theory, Willem Buiter (in Humane Wirtschaft July/Aug. 2009:3-9) has proposed a different approach: He believes that with a nominal negative interest rate policy, the velocity of money in circulation is increased and thus the demand for consumer goods rises. Based on the fact that around 70% of U.S. dollar notes and up to 50% of euro notes are held outside the issuing countries, a nominal negative interest rate policy would eliminate cash. The aim is to detach cash from its function as a unit of account - e.g. for assets or income. But quite apart from the fact that the entire informal economy, which accounts for a significant proportion of total economic output in less developed countries, is unthinkable without cash, the abolition of cash opens the floodgates for the state to monitor its citizens' every move. Although the transparent

individual already exists to a large extent as a result of credit cards and e-banking, the last vestige of (economic) anonymity would be lost through the abolition of cash.

Klaus Willemsen (in Humane Wirtschaft, March/April 2011:3) has also proposed to ensure that financial assets are subject to a negative interest rate in the form of a liquidity fee. Willemsen argues that a negative interest rate would lead to a stabilization of the velocity of money. However, this is doubtful. From the quantity equation of money ("quantity of money x velocity of circulation = quantity of goods x price level," cf. Eisenhut 2012:107), we know that an increase in the velocity of circulation leads to rising inflation for the same quantity of money. Precisely because market participants pass on their liquidity quickly when interest rates are zero or negative, they thereby increase inflation (more money is available in a shorter period of time) - either for tangible assets or for consumer goods, or for both. Negative interest rates only make sense - as was the case in Wörgl at the time - when the economy is in a deflationary spiral, thus fueling demand. Also, the relief assumed by Willemsen for the public sector through zero or negative interest rates on the expenditure side (loans and interest) is offset by reduced revenues for the state on the revenue side. For example, the negative interest rate phase in Europe in 2014/2015 did not lead to any reduction in government debt - quite the opposite: because debt could never be incurred so cheaply, debt tended to increase.

By contrast, government revenue shortfalls - for whatever reason - can be massive under certain circumstances, as was shown, for example, in the wake of the banking crisis in the canton of Zurich, when the state lost hundreds of millions of issues in corporate profit taxes.

As I said, nominal negative interest rates are not desirable: Nominal negative interest rates lead people to hoard cash. At the beginning of 2015, for example, it became known that quite a number of pension funds in Switzerland were hoarding large amounts of cash, which cannot be at all desirable from an economic point of view. Or investors are fleeing into real assets. This was evident in 2014 and 2015 in Switzerland, for example, where as a result of the negative interest rates set by the National Bank - and due to cheap mortgage loans - there was a veritable run on real estate, with property prices continuing to rise. Economics professor Philipp Bagus also pointed out that with negative interest rates, too few

companies invest because there are too few profitable projects. At the same time, however, negative interest rates have the effect that virtually every investment becomes profitable at some point if the negative interest rate is large enough, say at -7% (see Neue Zürcher Zeitung, 1.6.2016:25). Or to put it another way: If the loss in value of an asset as a result of negative interest rates is large enough, a smaller loss in value - of an unprofitable investment, for example - already appears attractive again. Bagus (cf. Neue Zürcher Zeitung, 1.6.2016:25) concluded: "The negative interest rate has fatal consequences, because it keeps unprofitable companies alive". Seen in this light, the negative interest rate can also be seen as a "frontal attack on the market economy" (Neue Zürcher Zeitung of 1.6.2016:25), because it means that an efficient allocation of resources no longer works. More and more economists today are of the opinion that nominal demand is not increased by negative interest rates.

In 2017, the Scientific Advisory Board of the German Federal Ministry for Economic Affairs and Energy also discussed the arguments for and against the zero interest rate and negative interest rate policies and published its report "Zur Diskussion um Bargeld und um die Null-Zins-Politik der Zentralbanken" on February 9, 2017. In it, he concluded that the zero interest rate policy was dangerous for two main reasons: first, negative interest rates would mean that the fundamental value of many asset investments would no longer be defined and thus a key instrument of portfolio investments would lose its significance. Second, zero interest rates would mean that many financial institutions, e.g. insurance companies, would no longer be able to generate profits and would thus ultimately no longer be able to meet their obligations (Gersbach/Hellwig in Die Volkswirtschaft of 8/9-2017:8/9).

In addition: Just like inflation, nominally negative interest rates lead to a fundamental preference for the rich and super-rich: People with large (monetary) assets can more easily and quickly convert their monetary assets into tangible assets, e.g. in the form of real estate, company shares or other tangible assets. Small and medium savers, who need a much larger portion of their money for living expenses, have too small volumes of money to acquire larger tangible assets. On the other hand, if zero or negative interest rates are passed on, their savings will decrease. If interest on retirement savings is stopped, the entire system of old-age provision - at least that part of it that is based on the funded method - will be at risk

in the medium term. This was already evident in 2014, when many pension funds had great difficulty in achieving the required minimum interest rate. Moreover, if the stock market boom ends, the entire pension system is in danger of imploding.

While high inflation leads people to spend their money as quickly as possible because they are afraid of losing the value of their money, people tend to hoard cash in times of deflation - i.e. when inflation is high and negative or prices continue to fall. Just like inflation, nominally negative interest rates lead to a fundamental preference for the rich and super-rich: People with large (financial) assets can more easily and quickly convert their financial assets into tangible assets, e.g. in the form of real estate, company shares or other tangible assets. Small and medium savers, who need a much larger part of their money for living expenses, have too small volumes of money to acquire larger tangible assets.

Exactly the same error of thinking is committed by those free economists who - like Andreas Bangemann in Humane Wirtschaft of July/August 2014:13) - hail the ECB's negative interest rates on capital deposited by commercial banks with the European Central Bank as a benefit for the little guy. It is true that - at least in theory - as interest rates fall, the prices of consumer goods fall, easing the burden on consumers' spending budgets. And because consumption costs are more significant for low-income earners or people without assets than for people with large assets - even a rich person can only eat three or perhaps four times a day - this is a greater short-term advantage for the former. The only thing is that, as we know, in the longer term falling prices lead to deflation, i.e. a fall in demand, which reduces production and leads to job losses. And unemployed low-income earners and people without assets - at the latest after unemployment benefits expire - can no longer buy many of the (not immediately vital) products, even if they have become 10 or 20% cheaper. And once consumers have adjusted to falling prices, they hold back even further on purchases because the product may be available even cheaper tomorrow. That's why deflation is considered much more dangerous than inflation.

Even among central banks, negative interest rates were and are controversial: While the European central banks and especially the European Central Bank, but also the Swiss National Bank, saw negative interest rates as a logical continuation of the low interest rate

policy, the U.S. Federal Reserve has never considered going below the zero percent limit as an instrument of monetary policy (cf. Uhlig in Neue Zürcher Zeitung, April 27, 2015:21). The negative interest rate policy reaches its limit at the latest when the costs of negative interest rates are greater than securing cash holdings. This limit was already reached in part in 2015.

From an ecological perspective, too, an increase in the flight into tangible assets - and thus an increase in the purchase of consumer goods - is only desirable to a limited extent: boom and bust phases have still led to greater destruction of the environment. While today this additional environmental destruction is concentrated in phases of economic boom, the massive increase in consumption and thus in environmental destruction would no longer be "merely" cyclical and dependent on the business cycle, but would become systemic and thus permanent with the introduction of fiat money or negative nominal interest rates. Increasing consumer demand can at best make sense for a limited period in a phase of recession or economic crisis, but it can by no means be a desirable long-term effect.

Another problem speaks against the introduction of negative nominal interest rates: Our entire social security system is based on two mechanisms: on the pay-as-you-go system (in Switzerland: AHV, i.e. state pension scheme) and on the funded system (in Switzerland: private pension funds and third-pillar retirement savings). While the pay-as-you-go system would be affected more indirectly by negative nominal interest rates - old-age pensions would decline in the longer term via a trend decline in the wage level and thus via declining AHV contributions - the funded system of private pension savings institutions will sooner or later run into difficulties and may even collapse: The projected retirement pension rests to a large extent on the fact that, in addition to the regular savings contributions to be paid in, the growing savings capital is subject to a more or less constant rate of interest. In the event of a negative nominal interest rate, the saved retirement capital gradually melts away - incidentally, the same effect to which a number of pension systems in Latin America and former socialist states were subjected. With the predictable result that old-age pensions became so small in nominal and real terms that they functioned at best as a kind of pocket money. Incidentally, pocket money that was the only income for hundreds of thousands of Russian pensioners after the fall of the Soviet Union.

Does the Islamic - and, incidentally, also in the Christian Middle Ages - prevailing understanding, according to which any interest is to be equated with usury and therefore forbidden, help here? In modern Islam, three types of financial transactions are forbidden: First, investments must conform to Islamic values. Therefore, investments in production chains that serve to produce pork, in weapons production, alcohol production, the erotic industry and in parts of the entertainment industry are forbidden. Second, interest is prohibited. And thirdly, according to Islamic legal understanding, no added value may be created from money, therefore earnings from gambling and speculation are not permitted, furthermore insurance earnings without corresponding benefits are at least problematic (cf. Maniera in Neue Zürcher Zeitung of 2.7.2013). Islamic financial products are based on the principle of co-ownership and mutuality. Sharia-compliant bonds, so-called sukuk, are widespread. With these, the investor acquires co-ownership for the term and participates in the returns. Sharia compliance refers to the product and not to the issuer (see Maniera in Neue Zürcher Zeitung, July 2, 2013). Saudi Arabia, for example, financed the construction of King Abdulaziz International Airport in Jidda with such bonds (see Maniera in Neue Zürcher Zeitung, July 2, 2013). However, one can rightly object that Sharia-compliant co-ownership in the form of bonds is ultimately only a formal renaming of the forbidden taking of interest (cf. Jäggi 2021:77ff.). But such models are definitely worth examining from an ethical point of view.

Felix Fuders (in Humane Wirtschaft, March/April 2010b:26ff.) takes an intermediate position between an absolute prohibition of interest and the current interest economy by demanding a prohibition of interest only on monetary assets, but not on real assets. He also disputes the view that interest is a compensation for consumption renunciation: "The good, the use of which is renounced, has not yet been bought. Only when the money has been exchanged for real goods and these are then rented out instead of being used can one speak of renunciation of consumption. The one who lends his money does not renounce consumption, which he can still have afterwards. He gets the money back. Instead of a premium for the renunciation of consumption, interest is a liquidity or non-hoarding premium, as John Maynard Keynes characterized it more aptly". In this sense, then, the purchase of a residential property and subsequent rental to a third party would be permissible, while the investment of financial assets in an interest-based investment product

would be excluded. Fuders (in Humane Wirtschaft, March/April 2010b:27) also believes that investment in a business would be permissible: "It should be noted that, of course, capital attracts capital even in an interest-free economic system. Those who invest more can also gain more, which they can reinvest. Even in an interest-free economic system, there will be concentrations of wealth, and it will be possible to invest so much wealth that one can live off the (real economic) profit without having to continue working. For example, the founder of a business may later, if his business is doing well, appoint a manager to run the business while the owner of the business himself is no longer working. Such unemployed income, unlike interest-based wealth redistribution, appears equitable because it is based on the entrepreneur's own up-front work. The entrepreneur creates value and often jobs. The lender of money, on the other hand, does not produce values himself" (Fuders in Humane Wirtschaft, March/April 2010b:27). The distinction between interest from money and interest from real economic interest is worth considering. On the one hand, such a distinction would lead to increased investment in real goods and real values. On the other hand, however, the question arises whether the dividing line between investing in money and investing in real assets is always so clear: Does investing in a hedge fund belong to the first or to the second category, does granting a bank mortgage to buy a house belong to the first or to the second category? If someone grants an uncommitted loan, would the resulting interest be a monetary value, but in contrast, would the interest from a loan for a specific purpose be "real economic"?

If the free economist Simon Bichlmaier (in Humane Wirtschaft of March/April 2010a) correctly states that below a certain minimum interest rate money is no longer invested in a fixed way because the advantage of immediate availability is valued higher than the all too low interest rate, then this is even more true for negative interest rates: This money is then missing in the real economy because nobody is interested anymore to invest money in a company in the long run.

2.2 Interest Rates as Instruments of Central Banks and Banks

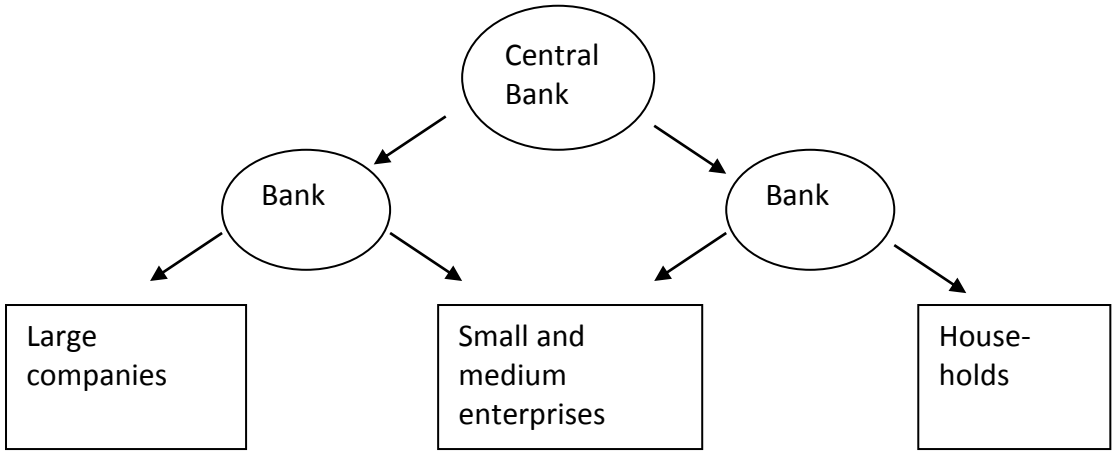
According to Bloss (et al. 2009:27), the interest rate is the most important determinant in the economic cycle. "The interest rate is an important economic indicator and control instrument with effects on the financial and real economy." Bloss et al. (2009:27) explain the

function of the interest rate as follows: "If an economy is on the verge of a recession, interest rates are lowered by central banks. As a result, liquidity increases and the economy receives new impetus. As a result of the lowered interest rate, household consumption increases because the opportunity cost of holding money, i.e. foregone interest, falls. This increase in demand, coupled with a growing willingness of companies to invest, leads to an overall economic upswing" (Bloss et al.2009:27). Moreover, at least in theory, a reduction in interest rates causes the savings rate of households to fall, while at the same time the demand for credit increases.

In 1992, J. B. Taylor (1993) proposed a monetary policy control rule according to which the central bank should react with its monetary policy interest rate to the deviation of inflation from its target value and the output gap. By output gap is meant the deviation of gross domestic product GDP from potential output, whereby there are various methods of calculation (see Rudolf/Zurlinden in Die Volkswirtschaft 6-2011:18). According to the Taylor rule, the central bank should raise the monetary policy interest rate in the event of rising inflation and a larger increase in GDP output relative to potential output. Conversely, the central bank should lower the monetary policy interest rate when inflation declines and GDP output grows more slowly than potential output. The Taylor rule describes U.S. monetary policy in the 1980s and 1990s very well and is followed by many central banks today (see Rudolf/Zurlinden in Die Volkswirtschaft 6-2011:18).

However, interest rate theorists have objected to the money interest rate policy that it uses the interest rate or the interest rate level as a control instrument without understanding the actual character of the interest rate.

But how does lending work?



The central bank plays the overriding role in lending. In return for a key interest rate, the central bank makes loans available to banks. At the same time, the central bank intervenes with monetary policy measures depending on the economic situation.

However, it has become apparent that the interest rate policy instrument can also become blunt. In the aftermath of the 2008 financial crisis, for example, key interest rates in a number of countries fell toward 0%, and some countries - such as Sweden - have known negative interest rates for some time (see State Secretariat for Economic Affairs SECO Summer 2017:8).

It is striking that since the financial crisis of 2008 until 2017, key interest rates have hovered around 0% or even in negative territory in most countries.

In 2012 and 2013, the Danish central bank operated "the first real field experiment for negative interest rates" - according to Müller in Schweizerische Handelszeitung, May 16, 2013. In July 2012, the central bank in Denmark introduced a deposit rate of -0.2% to ward off the influx of capital from the EU area. Later, the central bank reduced the interest rate to -0.1%. It was assumed that negative interest rates above half a percent would lead to undesirable knock-on effects because savers would then withdraw their deposits from the banks and hoard cash (see Müller in Schweizerische Handelszeitung, May 16, 2013). The introduction of negative interest rates by the European Central Bank on June 5, 2014 was bound to introduce problems for countries like Denmark or Switzerland. Thus, even more

foreign capital threatened to flow into Switzerland and drive the Swiss franc exchange rate further up. In this case, the only way to keep the Swiss franc exchange rate at its previous level would have been to introduce negative interest rates in Switzerland that were at least as high. After all, by May 2013, the central bank money supply in Switzerland had already grown to seven times its 2007 volume (see Müller in Schweizerische Handelszeitung, May 16, 2013).

Therefore, the Swiss National Bank announced in December 2014 that it would introduce a negative interest rate of -0.25% on large amounts parked by commercial banks at the National Bank as of Jan. 22, 2015. This regulation applied to large banks for amounts above 20 times the statutory minimum reserves, and to those banks not subject to a minimum reserve regulation from 10 million Swiss francs (see Fuster in Neue Zürcher Zeitung of 19.12.2014b:23). In this way, the SNB wanted to prevent the euro exchange rate from falling below Fr. 1.20 as a result of the increased demand for Swiss francs, given the weakness of the euro and the massive decline in the ruble (cf. Fuster in Neue Zürcher Zeitung, 19.12.2014a:1). On January 15, 2015, at the same time as the Swiss franc was surprisingly freed and the peg to the euro rate was loosened, the Swiss National Bank decided to raise the negative interest rate on for liquid balances at the SNB to -0.75% (cf. Neue Luzerner Zeitung of January 16, 2015:2).

The big question was, of course, whether or not the commercial banks would pass on these negative interest rates to customers, and especially to savers. Although most of the banks expressed the second view, things looked somewhat different in the long term; at least when you consider that savings interest rates had already been hovering around 0% for several years. Some economists then predicted a further real estate boom and a hoarding of cash as well as a flight into real assets. In any case, some expected if not negative interest rates on savings accounts, then higher fees (see Neue Zürcher Zeitung, December 19, 2014c:23). On March 10, 2016, the European Central Bank increased the negative interest rate to -0.4% from -0.3%. At the same time, the ECB increased the purchase program of government bonds of EU member states, which runs until March 2017, by 20 billion to 80 billion euros - with the aim of keeping inflation close to but below 2% (cf. Rasch in Neue Zrücher zeitung of 11.3.2016:25). Thus, Switzerland - with its negative interest rate of -0.75%

had once again been lucky, because a larger negative interest rate of the ECB would have forced Switzerland to follow suit in order to keep the distance to the ECB and to prevent larger capital flows from the EU to Switzerland.

Already in 1971, the Swiss National Bank had introduced a negative interest rate of 2% per quarter, which was later increased up to 10% (see Fuster in neue Zürcher Zeitung of 20.12.2014:27). Even then, the SNB had wanted to reduce the inflow of foreign capital into Switzerland - and even then, the measure had worked more badly than well. At that time, the real interest rate on savings deposits was at times below 0%.

In the U.S., key interest rates also hovered around zero between 2008 and 2012 (see Rasch in Neue Zürcher Zeitung, April 26, 2012). In Japan, too, key bank rates tended toward zero as a result of deflation in the 1990s and 2000s. Economist Gunther Schnabl (in Neue Zürcher Zeitung of 8/22/2012) showed that this development is not entirely unproblematic. On the one hand, a zero interest rate policy can keep ailing banks artificially alive for years by injecting almost free liquidity. On the other hand, according to Schnabl (in Neue Zürcher Zeitung, August 22, 2012), a zero interest rate policy - with simultaneous government economic stimulus programs and government bailouts for ailing banks - can lead to a creeping nationalization of an economy, as has happened in Japan, for example. There, for example, the share of private investments in the gross domestic product was still 32% in 1990, whereas it fell to 20% by 2011. In the same period, government spending rose from 13% to 21% (Schnabl in Neue Zürcher Zeitung, Aug. 22, 2012). However, it should be borne in mind that the private sector always reacts much more quickly to recessions than the state - which is quite desirable. And Japan was in a 20-year deflation phase after 1990. More serious is Schnabl's thesis (in Neue Zürcher Zeitung, Aug. 22, 2012) that flooding the financial markets with cheap money can lead to financial bubbles because the signaling effect of the interest rate is thereby eliminated. In addition, there is the danger of massively higher inflation.

In functioning financial markets, the Libor interest rate is also an important indicator. In normal times, commercial banks lend each other money on an ongoing and uncomplicated basis, depending on their current needs. In this so-called interbank business, credit

institutions lend money to each other. This is done on the basis of the interest rates EURIBOR and LIBOR plus risk premiums. The difference - "spread" - between the prime rate and the interbank rate reflects market sentiment. A rising spread is caused by the decline in liquidity.

The interest rates for loans from banks to companies are determined by the rating. Large companies receive more attractive lending terms due to capital market access and better ratings. However, if demand falls sharply, their creditworthiness declines and banks' confidence in the company falls. The consequences are a shortage of credit and higher prices, a decline in investment and - in the worst case - job cuts.

At the same time, small and medium-sized enterprises are dependent on demand from both households and large companies. Declining demand, poorer credit ratings and lower credit collateral make access to debt capital more difficult.

In addition, household demand is partly dependent on interest rates in the consumer credit sector. Layoffs lead to higher unemployment and a loss of household purchasing power. This is often further exacerbated by more expensive consumer credit. Conversely, cheaper consumer loans have a stimulating effect on consumption.

In principle, the following interest rate scenarios are possible:

1) High interest rate phases
2) Moderate interest rates up to 5%
3) Zero interest rate
4) Negative interest rate

Scenario 1: High interest rate phases: This scenario played out roughly in the 1970s and in the boom phase of the 1980s, but also again before the 2007/2008 financial crisis.

Scenario 2: Moderate interest rates: Except in pronounced boom phases and in zero and negative interest rate periods, this scenario was - and still is - the most common. In Switzerland, for example, interest rates have been predominantly in this range since 1996:

Yield on federal bonds and average interest rate
In %

	1996	2000	2004	2008	2010	2013
Federal bonds	4.13	3.55	2.38	2.15	1.67	1.25
Domestic liabilities denominated in Swiss francs in savings and investment form	2.48	1.88	0.72	1.18	0.68	0.43
Medium-term notes	5.02	3.73	2.57	2.68	2.12	1.52
Mortgage receivables	4.93	4.32	3.07	3.33	2.58	2.02

Source:
http://www.bfs.admin.ch/bfs/portal/de/index/themen/12/03/blank/kennzahlen/zinssaetze__bankeinlagen__hypotheken_.html.

Scenario 3: Zero interest rate: This situation was already on the horizon in Switzerland from 2013 - only to change to scenario 4 two years later.

Scenario 4: Negative interest rate: This scenario became reality for the first time in a while in 2012, when the Danish central bank introduced a negative interest rate of 0.2 and later 0.1%. In mid-2014, the European Central Bank introduced negative interest rates, and in January 2015, the Swiss National Bank did so at 0.75%. The last time the Swiss National Bank levied a negative interest rate was in 1971 to curb the inflow of foreign capital. Negative interest rate periods occur mainly when markets are flooded with money (e.g. quantitative easing) or when the inflow of capital is to be slowed down.

2.3 Possible Conclusion

To limit excessive lending, returns on capital should be limited, e.g. to a maximum level of 6-7%. This can easily be done through legislation. For example, in Switzerland, the maximum interest rate allowed on consumer loans was 18%; from 2003 to mid-2016, it was 15%. As of July 1, 2016, a new maximum interest rate of 10% applied to consumer loans in Switzerland (see Krampf in Beobachter 13/2016:8 and Walder in K-Tipp of January 27, 2016:29) - against which the credit industry fought tooth and nail. Anything above this is considered usury by the law and is prohibited. However, there is nothing to prevent this limit from being set even lower - for all capital investments. This would limit the circulation speed of capital and

significantly reduce the interest burden on the economy, which in some cases is already 70-80% of the purchase price of goods, depending on the method of calculation. Furthermore, the rate of redistribution of wealth to the richest of the population would at least be slowed down.

For the whole thing to work, on the one hand, interest on savings deposits or other capital investments (deposit interest or credit interest) would have to be limited to a maximum of 5%. Conversely, maximum interest rates (lending interest or debit interest) of - let's say - 6 - 7% should also be set for loans and credits. In this context, the difference of 1-2% between deposits and loans, i.e. the classic differential business - would form the basis for banking activity. Highly speculative investments with equity would have to be prohibited for commercial banks. However, it would have to be ensured that the market - within the given framework - could still function flexibly.

3. Control Questions

1. What was the position of the Christian Church on interest over time? 2.
2. Why is the effect of exponential growth of financial assets (compound interest) problematic from an economic point of view? 3.
3. Why do high interest rates often go hand in hand with high unemployment?
4. What is the understanding of interest rate in the three main economic theoretical approaches: Classical, Neoclassical, and Keynesianism?
5. Explain the central paradigm of property economics.
6. What are the four types of interest according to Hannich?
7. What did the Wörgl experiment consist of?
8. What does Gesell's theory of fading money say and what are its weaknesses?
9. What does the proposal of negative nominal interest rates mean and what do you think about it?
10. Explain the interest rate as a control instrument of central banks.
11. What does the "spread" mean in the interbank market?
12. How could deposit and lending rates be regulated?

4. Links

Die Problematik des Zinssystems
Von Bernd Senf
http://www.berndsenf.de/pdf/DieProblematikDesZinssystems.pdf

Roland Wirth
Eine Neubewertung der Freiwirtschaftslehre aus wirtschaftsethischer Sicht
http://www.humane-wirtschaft.de/pdf_z/wirth_neubewertung-freiwirtschaftslehre_2004.pdf

Materialien zur Geld-, Zins- und Schuldenproblematik
http://userpage.fu-berlin.de/~roehrigw/

Silvio Gesells Freiwirtschaftslehre
http://www.nadir.org/nadir/archiv/Antifaschismus/Organisationen/Diverse/AIgesell.html

Kritik und offene Fragen zur Freiwirtschaftslehre
http://userpage.fu-berlin.de/roehrigw/senf/nwokri.html

Die Welt der Leitzinsen im Überblick
http://www.leitzinsen.info/

Leitzinsen Euro-Raum, England, Japan, Schweiz und USA
http://www.tagesgeldvergleich.net/statistiken/leitzinsen.html

Warum das Zinsproblem ein Profitproblem ist
Von Jörg Gastmann
https://kritisches-netzwerk.de/content/warum-das-zinsproblem-ein-profitproblem-ist

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