

FIAT LUX AND CRONY CAPITALISM — THE IMPACT OF MONETARY AND FISCAL POLICIES ON THE AUTOMOBILE INDUSTRY IN USA AND EUROPE FROM 2001 TO 2010

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Abstract: This paper focuses on detecting the short-term and long-term effects of monetary and fiscal policies on the US-American and European automotive market in the period from 2001 to 2010, looking at expansionary monetary policies, credit expansions, bail-outs and scrappage campaigns. The study aims to explain the reasons of the latest subprime-crisis, whose negative effects were in particular visible in the period from 2008 to 2010, using the Austrian Business Cycle theory to detect its validity for the automotive industry. As for fiscal policies, the impact of incentives such as scrappage campaigns and other state interventions on the automotive industry will be critically evaluated. The target is to detect causalities, distinguishing between apparent symptoms and actual causes, to define whether artificial short-term economic booms caused by expansive monetary policies and public interventionism have ultimately led to the recent economic crisis. However, apart from empirically evaluating the impact of monetary and fiscal policies on the automotive sector within the mentioned period, this paper also pretends to highlight the general crucial relevance of dynamic efficiency and entrepreneurial creativity and consequently the automotive OEMs' need to detect market niches in order to optimize their company's sustainability and competitiveness.

Keywords: Fiscal policies, monetary policies, automotive industry, credit expansion, fractional reserve banking, public incentives, bailouts, USA, Europe, Austrian Business Cycle Theory

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Resumen: Este trabajo se centra en detectar los efectos a corto y largo plazo de las políticas monetarias y fiscales en el mercado automotriz estadounidense y europeo en el período de 2001 a 2010, analizando las políticas monetarias expansivas, las expansiones de crédito, los ‘bailouts’ y las campañas de desguace. El objetivo del estudio es explicar los orígenes de la última crisis subprime, cuyos efectos negativos fueron particularmente visibles en el período de 2008 a 2010, utilizando la teoría austriaca del ciclo económico para detectar su validez para la industria automotriz. En cuanto a las políticas fiscales, se evaluará críticamente el impacto de incentivos como las campañas de desguace y otras intervenciones estatales en la industria automotriz. El objetivo es detectar causalidades, distinguiendo entre los síntomas aparentes y las causas reales, para definir si, en última instancia, el auge económico artificial, causado por políticas monetarias expansivas y el intervencionismo estatal, condujo a la reciente crisis económica. Sin embargo, aparte de evaluar empíricamente el impacto de las políticas monetarias y fiscales en el sector automotriz dentro del período mencionado, este artículo también pretende resaltar la relevancia crucial general de la ‘eficiencia dinámica’ y la ‘creatividad empresarial’ y, en consecuencia, la necesidad de detectar nichos de mercado para optimizar la sostenibilidad y la competitividad de una empresa.

Palabras clave: políticas fiscales, políticas monetarias, industria automotriz, expansión de crédito, banca de reserva fraccionaria, incentivos públicos, rescates, Estados Unidos, Europa, teoría austriaca del ciclo económico.

Clasificación JEL: E12, E14, E32, E43, E51, E52, E62, E63, G33, H21, N12, N14

I INTRODUCTION

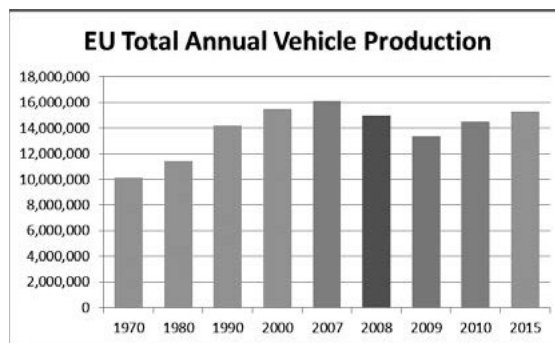
Since the end of World War II, the European automotive industry has generally shown a stable growth rate, only significantly hampered by the effects of the so-called ‘1973 oil crisis’ as well as by the latest financial crisis (‘subprime crisis’) between the years 2007 to 2009. As a consequence, and even ten years after the visible outbreak of mentioned subprime crisis, several European countries are still suffering from a prolonged period of low interest rates, low economic growth and

financial volatility. The popular myth is that *laissez-faire* — often also called ‘neo-liberal’ — politics had deregulated the financial markets which ultimately led to the financial crash. This paper will intend to show that national governments and other institutions such as the Federal Reserve and other central banks, as well as the US Congress and the European Union are the real originators of the crisis. It will be argued that ultimately, it is the wrong and destructive misinterpretation by men to assume that political interventionism of centrally steered public institutions could improve an economy’s performance from a long-term perspective. Economists such as Roger Garrison (2001) argue that the main causes of the so-called recent subprime crisis were the expansive monetary policies led by the Federal Reserve System, the European Central Bank and other central banks, by increasing the money supply while reducing interest rates to an often unsustainable level. These actions are considered to have led to the heavy recessions which hampered several economies in the period from 2007 to 2010, consequently also leading to a significant crisis in the automotive industry which hampered several automotive OEMs, while even accelerating General Motor’s bankruptcy filing in 2009. However, instead of ending mentioned ultra-loose monetary policy, several governments and central banks — in particular the US-American Federal Reserve — increased the money supply from 2007 onwards, with the reported aim ‘to boost the economy, helping to increase investments and consumption’.

In regards to the general macroeconomic effects and risks of monetary policies, several thorough research papers can already be found, individually defending the concepts and theories of major economic schools of thought, such as monetarism, Keynesianism, and the Austrian school of economics. Among others, the German economist Gunther Schnabl (2008, 2011, 2015), as well as Spain’s Miguel A. Alonso Neira (2011, 2014), but also Tobias Adrian and Hyun Song Shin (2008), George Selgin and Lawrence H. White (2012) as well as David Howden and Joseph Salerno (2015) have written thorough and detailed analyses on the correlation between short term economic booms, caused by ultra-loose monetary policies, and the following recessions. It is often argued that in particular the construction sector and the automotive industry have suffered from market distortions caused by ultra-loose monetary policies and

artificial credit expansions. However, while detailed research papers have been written on the so-called US-American ‘mortgage crisis’ in 2007 and the Spanish ‘property bubble’ in 2008, almost no thorough research can be found on the monetary origins of the simultaneously occurring crisis within the automotive sector, which led to significant challenges for major OEMs, such as General Motors, Chrysler, Ford, PSA and SEAT. Without truly understanding the real causes of historic events, it is impossible to properly prepare for similar situations in the future. With this research paper, the mentioned data and knowledge gap should be filled.

CHART N° 1



Source: ACEA (passenger cars only, commercial vehicles excluded)

As shown in the above chart, the European automotive production had constantly increased throughout the past decades, reaching its peak in 2007 right before the financial crisis. After significant decreases in 2008 and 2009, the markets started to recover in 2010, showing again a constant growth since then.

1. Theoretical Background

Increases in the money supply enter the economy through credit markets, when central banks literally ‘lend money into existence’.

Such market distortion — caused by central banks' interventionism, meant to create (short-term) economic growth — inevitably 'drives a wedge' between savings and investments within the economy. Consequently, these new low interest rates stimulate investments in the early stages of production, e.g. construction works/ housing and the automotive industry. Whereas most classical and neo-classical economists mainly ignore the heterogeneous and multi-specific structure of capital, F.A. von Hayek (1931,1941) emphasized the temporal pattern of heterogeneous capital goods as well as the different stages of production which can react entirely differently to the injection of new monetary units by central banks.

The study focuses on the US-American and the European automotive market, paying particular attention to the USA and Spain in regards to monetary and fiscal policies. The recent financial and economic crisis in the USA and Spain can be seen as 'useful examples' of how expansive monetary policies combined with a market rate of interest below 'the natural rate of interest' can cause boom-and-bust cycles. Both, the US-American and the Spanish economy and their automotive industries were heavily affected by the mentioned crisis and therefore the causes and corresponding correlations should be evaluated.

II

MONETARY POLICIES AND THE AUSTRIAN BUSINESS CYCLE THEORY

1. The Effects of Monetary Policies on the Economy

The neo-classical approach throughout the past decades, the abolition of the Gold Standard, the introduction of the so-called «fiat money system», the fractional reserve banking as well as other recent monetary policies such as quantitative easing, have all played a major role in creating the recent economic busts (Huerta de Soto 2010).

Moreover, these actions, in particular in their recent intensified combination, have also caused the significant devaluation of several currencies, such as the U.S. Dollar.

CHART N° 2



Source: US Bureau of Labour Statistics

The significant reduction of the purchasing power of major western currencies is clearly linked to the simultaneous increase of money supply, which in its current extent has only been possible after the implementation of the present fiat currency system in combination with the current fractional reserve banking system. The effects of fractional reserve banking and of the latest expansionary monetary policies on the US-economy — and ultimately on the global financial markets — cannot be ignored, which partially led to the boom at the beginning of the 21st century which ultimately ended in the crisis seen in the period from 2008 to 2010.

a) *Fractional Reserve Banking and its Impact on (Artificial) Booms and Busts*

Fractional reserve banking and the related fiat paper monetary system may also critically be referred to as 'a debt-based monetary

system' or 'credit-based monetary system' while the money created in parallel with debt can be considered as 'debt money' as virtually all new money is being created by people, businesses or governments that are further indebting themselves to banks. Ultimately, under the current system of fiat money, the central banks hold the monopoly over the production of base money (or central-bank money). They are able to increase the base-money supply at any time and any amount, whenever it seems to be economically or politically desirable. Thus, eventually it is the central bank that decides if or not banks can meet their payment obligations. Moreover, banks that engage in fractional-reserve banking in a fiat-money regime create contractual obligations which they cannot fulfill, as fractional-reserve banking constantly leads to a legal impossibility, in which the borrower and the depositor both become owners of the same money through bank lending. Fractional-reserve banking distorts and confuses property rights over money and according to Murray N. Rothbard it should be considered to be embezzlement. Moreover, the 'pyramid-like' dynamics inherent in fractional-reserve banking allow early participants in financial bubbles to profit at the expense of genuine savers.

Ludwig von Mises proved that fractional-reserve banking leads to significant economic problems, as banks are encouraged to engage in circulation-credit expansion — as they issue money through lending that is not backed by real savings. Circulation bank credit often leads to inflation and excessive indebtedness of the private sector, causing economic disequilibria and «boom-and-bust» cycles. Thus, fractional-reserve banking aggravates the economic risks and consequences of fiat money. Murray Rothbard stated that from a legal perspective, reserves of less than 100% constitute fraud on the part of banks and should be illegal. From an economic perspective he stated that full-reserve banking would eliminate the risk of bank runs. Rothbard (2004) defined the current banking system as one huge monopoly bank which is guided and coordinated by the central bank, and in this framework other banks can simply be regarded as branches of the central bank. Ultimately, the central banks support the existence of fractional-reserve banking and the corresponding creation of money out of «thin air.»

Thus, on the contrary, in a truly free market economy without the chance of ‘socializing’ corporate losses, without any public bailout programs and other incentives to support ‘system relevant companies which are too big to fail’, it is unlikely that banks could practice aggressive fractional-reserve banking as they would run the risk of not being able to assure liquidity and not being able to honor checks.

b) *Maturity Mismatching*

There are at least two crucial aspects related to monetary policies on which also famous Austrian economists have held thorough discussions: on the one hand, the efficiency and legitimacy of fractional reserve banking, and, on the other hand, the efficiency and legitimacy of maturity mismatching, i.e. «borrowing short and lending long.»

When banks or other financial entities take on short-term liabilities to finance long-term investments, they expand credit, creating more funds for investment than the amount of savings generated within the period. Barnett and Block (2009a and 2009b) argue that maturity mismatching is not only economically disruptive but also fraudulent. Barnett and Block state that, although maturity mismatching does not create more money (as fractional reserve banking does), it does distort interest rates. Alonso, Bagus and Rallo (2012) argue that in this case, the supply of credit would not accurately reflect the consumers’ time preference rate, leading to a distortion of the decision making process of the economic agents involved.

Consequently, one may argue that due to the risks of maturity mismatching and its distortion of the market, even 100% reserves (on demand deposits) may not be able to prevent boom-bust cycles for precisely this reason. However, as already stated by Böhm-Bawerk in 1901, ‘saving’ is not simply a quantity but must also be seen as a time dimension.

c) *Cantillon and ‘Monetary Inflation’ versus ‘Price inflation’*

Cantillon and the ‘Profiteers and Losers of Inflation’

If the money supply increases faster than real output then, *ceteris paribus*, price inflation occurs. Consequently, to properly understand the difference between ‘cause’ and ‘effect’ of several economic events, one needs to properly distinguish between ‘monetary inflation’ and ‘price inflation’. More precisely, monetary inflation can be seen as the increase in the volume of money and bank credit in relation to the volume of goods. It hampers the value of the monetary unit, reducing the value of past savings and discouraging people from increasing future savings. Moreover, monetary inflation does not affect all prices equally or at the same time, as it is strongly depending on the spending behavior of money holders all along the channels of monetary flows. This effect was well-analysed by Ricard Cantillon (1680s — 1734) and later on by Knut Wicksell, Ludwig von Mises, and F.A. Hayek. His ‘Cantillon effect’ shows the impact which changes in the money supply can have depending on where within the economy the money is injected. Money does not enter the economy evenly as stated in Milton Friedman’s concept of ‘helicopter money’ (Friedman, 1969). Instead, the first recipients benefit because they will have higher amounts of money while prices have not yet changed — leading to a higher real purchasing power. Consequently, several economists, such as Jesus Huerta de Soto argue that governmental institutions and banks benefit most from new money supply as they are expected to receive this money (monetary inflation) at an early stage, when general price increases (price inflation) are still not visible within the economy.

Therefore, it is mainly governments, other public institutions and banks which benefit most from the effects of monetary inflation.

The credit expansion that had led to the recent global financial crisis, which was mainly visible between 2008-2010, can be seen as a ‘*prime example of malinvestment*’. The European Central Bank (ECB) played a central role by maintaining interest rates too low for too long, causing an artificially high money supply within the European Monetary Union (EMU), while adding to the worldwide credit bubble which had been initiated by the US-American FED. Initially, the founding nations had officially agreed an inflation target of 2%, and a growth rate of the total money supply (M3) of

approximately 4.5% to guarantee a certain financial stability of the EMU. However, in reality, over the first eight years the average money supply in the Euro area reached 6.9% which is more than half above the initial target. With this significant amount of new money in circulation, which is not finding new goods and services to buy in the real economy, this excessive money must consequently be spent on the available stock of consumer goods or on larger investment opportunities, such as automobiles or real estate property.

As a result, in particular between 2002-2008, automobile sales volumes and even more so house prices increased significantly more than local salaries in several European countries. The most negative consequence of the recent easy money policy has been that the consequent inflationary low interest rates have discouraged saving. In several European countries, the net real interest after costs, taxes and real inflation have actually been close to zero — or even negative — for several years.

The following two charts clearly show the correlation between interest rates and (artificial) growth in the 'early stages of production'. From 2001 to 2007, new car sales significantly increased in Spain — to a large extent thanks to extremely low interest rates. Simultaneously, also the housing market was growing, leading to a clear price increase of real estate property.

CHART N° 3
SPAIN: NEW CAR SALES EVOLUTION 2001-2016

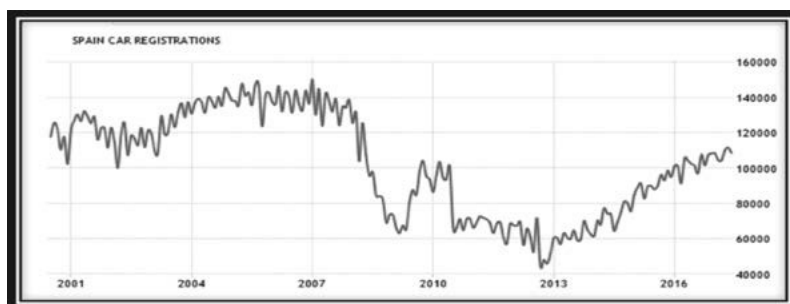
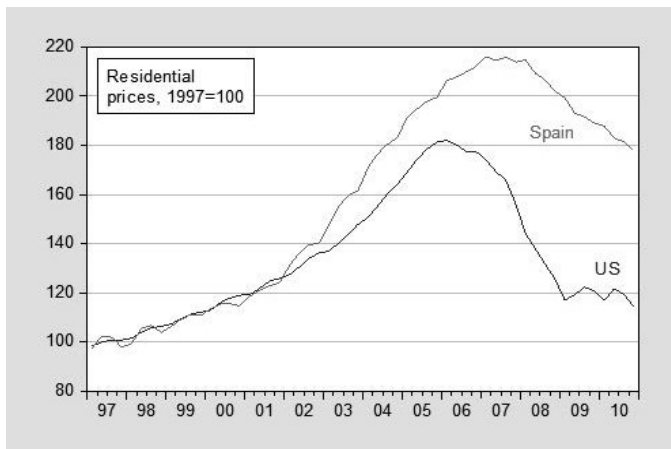


CHART N° 4
 USA AND SPAIN: HOUSING PRICE EVOLUTION 1997-2010
 (1997 = INDEX 100)



(Source: BIS, Annual Report)

2. The Business Cycle Analysis: Conceptual Structures and Methods

External factors such as political interventions can heavily affect a market's framework and even distort its core structure. Several macroeconomic tools can be used to evaluate the impact of expansionary monetary policies and credit expansions on the automotive industry, of which the mentioned 'Hayekian Triangle' with its stages of production, could be seen as the most effective one, in particular when used in combination with the so called Production Possibility Frontier (PPF) and the Loanable Funds Doctrine. These analyses will help to see the impact of money supply on the maximum possible production level of goods, as well as on the impact that the demand for and supply of loanable funds has on the interest rate. The 'Austrian Business Cycle Theory', mainly developed by Ludwig von Mises, Friedrich August von Hayek and

Roger Garrison (2000), will be used and critically analyzed, comparing it with the concepts developed by the neo-classical school and the monetarists. The Austrians' approach of defining «capital» as heterogeneous and multi-specific, looking at the temporal capital structure as well as appreciating the dynamic market processes created by creative and alert entrepreneurs should be evaluated as an interesting alternative to the monetary policies followed by most State governments and central banks since the early 20th century.

3. Introduction to the Hayekian Triangle. The Stages of Production and the Capital's Heterogeneity at a Glance

As shown in the Hayekian Triangle, the credit expansion caused by an increase in money supply, leads to an artificial growth of the early stages of production (e.g. the automotive industry), which to a high degree needs to be seen as mal-investment. The only contemporary school of thought which places the structure of production at the centre-stage of macroeconomic analysis is the Austrian School of economics.

Generally, a business cycle describes regularly occurring booms and busts in an economy while the so-called **Austrian business cycle theory** is explaining this phenomenon from the perspective of the Austrian School of economics. In 1912, it was developed by Ludwig von Mises in his *Theory of Money and Credit* and was then further elaborated by F.A. Hayek and other economists. Explaining the general concept in a nutshell, one may say that the analysed phenomena is mainly due to banks expanding credit well beyond their own assets and by the funds of their clients, mostly supported by the setting of low interest rates by a central bank. This additional (artificial) credit flow into the economy stimulates economic activity and investments into projects which had previously seemed unprofitable, but will ultimately lead to a distortion of the market by creating *malinvestment*. Once the banks stop this artificial credit extension, the corresponding unsustainable boom will come to an end. Thus, to prevent such an economic bust (and the resulting collapse of prices), the banks are urged to create more

credit, to assure that prices keep rising or that they at least remain stable — avoiding deflation which most banks, governments as well as ambassadors of neoclassical economics and in particular Keynesian economics consider as one of the most hazardous risks for any economy. However, such credit expansion certainly cannot continue forever, since there is neither additional capital nor new labour; but instead there is only more money and more debt. The artificially cheap credit creates the mentioned boom period, which potentially lasts for several years.

During this boom, prices often begin to rise, which may shift the entire yield curve up, but may increase long-term rates even more, due to the uncertainty over future (price) inflation. As stated, this boom is unsustainable and no matter what the banks do, the economy must crash. However, in the past, banks have often stopped the inflationary policies several months before the crash, so that the rise in short-term rates is, erroneously, considered by several politicians, journalists and mainstream economists as the actual «cause of the bust.»

4. Mises, Hayek and the Capital-based Macroeconomics

Capital-Based Macroeconomics can be seen as an outgrowth of the Austrian Business Cycle Theory — a theory set out in 1912 by Ludwig von Mises and developed in the 1930s by Friedrich A. Hayek and others. The Austrian Business Cycle Theory reveals the crucial differences between sustainable economic growth based on accumulated real savings on the one hand, and unsustainable booms caused by government interventionism and/or monetary policies on the other hand. Ludwig von Mises was the first one to define a precise Austrian business cycle theory in his work *The Theory of Money and Credit* (1912), founding his concept on the Wicksellian distinction between the natural rate of interest defined by supply and demand of loanable funds in equilibrium, and the money rate of interest prevailing within the market at a certain point in time.

Mises believed that «*the money rate of interest must sooner or later come to the level of the natural rate of interest.... if the rate of interest on*

loans is artificially reduced below the natural rate [...], then entrepreneurs are enabled and obliged to enter upon longer processes of production.»

Capital-based macroeconomics can be distinguished by its disaggregation, focusing on the problem of inter-temporal resource allocation. F. A. Hayek proved that a coordination of saving and investment decisions can be achieved by free-market movements in interest rates while he also highlighted the vulnerability of the market when interest rates are being manipulated by central banks.

Hayek's view was the opposite of Keynes' «Paradox of Thrift» which stated that a reduction in consumer spending results in excess inventories, causing production cutbacks, worker layoffs, and a spiralling downward of income and expenditures. Consequently, Keynes believed, the economy would go into recession, and the business community would commit itself to less, not more, investment.

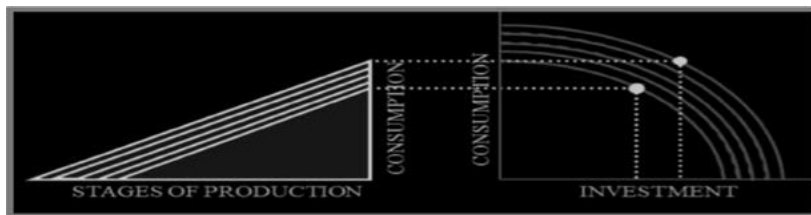
Roger Garrison (2001) argues that Keynes ideas could partially be right for retail inventories. In this case the derived-demand effect dominates as reduced consumer spending does often lead to a reduced inventory replacement, confirming that late-stage investments move with consumer spending. However, we must clearly differ between late-stage and early stage investments, between high-order and low-order goods. The interest-rate effect dominates in long-term, meaning early-stage, investments and consequently a lower interest rate can lead to a significant stimulation in several business sectors, for example regarding industrial construction or product development projects.

Consequently, capital-based macroeconomics disaggregates capital inter-temporarily as consumable output is produced by a sequence of stages of production, where the output of an early stage may be seen as the input for a later stage.

The earliest stages of production include the first processes involved for the production of a good, which can be mining and steelmaking, or the initial product development of a new good, and this stage may then be followed by the actual manufacturing process of certain goods. Consequently, automobile manufacturing can be seen as a perfect example for these early stages in which product development activities on the one hand and steelmaking

on the other hand may actually occur several years before the final vehicle is being sold to the end customer. Late stages include the final steps, the distribution, and ultimately putting the final item out for sale. In a growing economy, the 'number' of stages will increase, meaning that the triangle increases in size along with the outward expansion of the production possibilities frontier.

CHART N° 5



Source: Garrison (2001)

a) *Derived Demand Effect vs Time Discount Effect (?)*

Thus, if people choose to save more, they send out two seemingly conflicting signals to the market:

1. The Derived Demand Effect: Meaning that a reduction of consumption reduces the demand for investment goods which are in close temporal proximity with consumable output.
2. The Time-Discount, or Interest-Rate, Effect. A reduction of the interest rate means lower borrowing costs, which directly increases the demand for investment goods of the early stages of production.

However, to actually consider the 'derived demand' and the 'time discount' to be in conflict, one needs to follow the Keynesian perception that 'investment' is a simple aggregate ($C + I + G$). Keynes thought that any reduction in consumer spending would result in

excess inventories, which would then lead to production cutbacks, worker layoffs, and a mutual decrease of income and expenditures, leading the economy into recession, consequently minimize investments. To conclude, Hayek properly claimed that «*Mr. Keynes's aggregates conceal the most fundamental mechanisms of change.*»

Interest rates are determined by people's desire to save or consume, and the market interest rate is generally based on people's time preferences. A lower time preference indicates that people prefer to save instead of spending the money on consumption. On the other hand, increased saving certainly also increases the supply of loanable funds and hence lowers the market interest rate. Consequently, both F.A. Hayek and R. Garrison argued that this allows market participants to borrow more money for their capital investment, resulting in more investment on long-term projects which will then increase the supply of goods in the future. To simplify this process in one phrase: if there is more saving today, consumption will significantly be increased in the future.

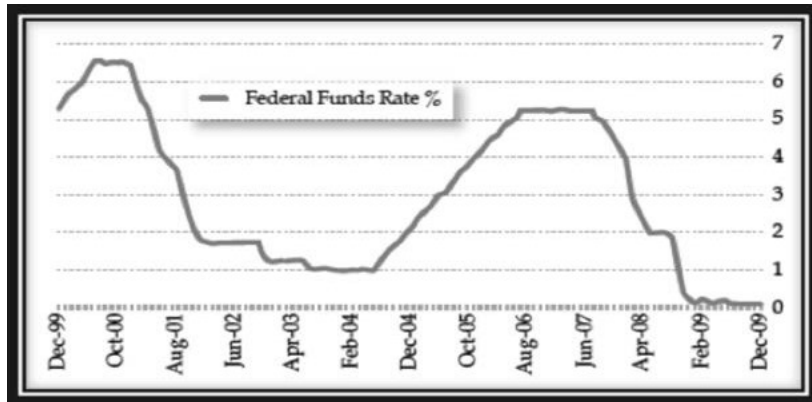
Consequently, in reality, an increase in saving simply results in a reallocation of resources among the stages of production and both, the derived demand effect as well as the time discount effect, will have separate and complementary effects on the capital structure.

5. Artificial Booms Caused by Credit Expansions without Prior Savings

However, the Hayekian triangle is distorted when interest rates are being controlled by a central bank, as central banks can put downward pressure on interest rates by increasing money supply. When this happens, Hayek's triangle loses its straight hypotenuse. This artificial market distortion is harmful as resources will not have been allocated through a real, market-dictated interest rate. Mentioned process and the corresponding triangle are the basis of Austrian Business Cycle Theory. Increases in the money supply enter the economy through credit markets as the central bank literally 'lends money into existence'. Due to the resulting lower interest rate, people will save less and consume more. The new

money drives a wedge between saving and investment, also resulting in a market disequilibrium which, at least initially, will be 'successfully hidden' by the infusion of loanable funds. These lower interest rates lead to less saving and more consumption and the mentioned 'wedge between saving and investment' actually translates into a 'tug-of-war' between consumers and investors. Consequently, the credit expansion pushes the economy toward a point that lies beyond the PPF. Mentioned conflicts within the structure of an economy can be seen as a direct result of monetary interventionism by central banks, often in agreement with the corresponding State governments.

CHART N° 6
USA: SHORT-TERM INTEREST RATE EVOLUTION, 1999-2009



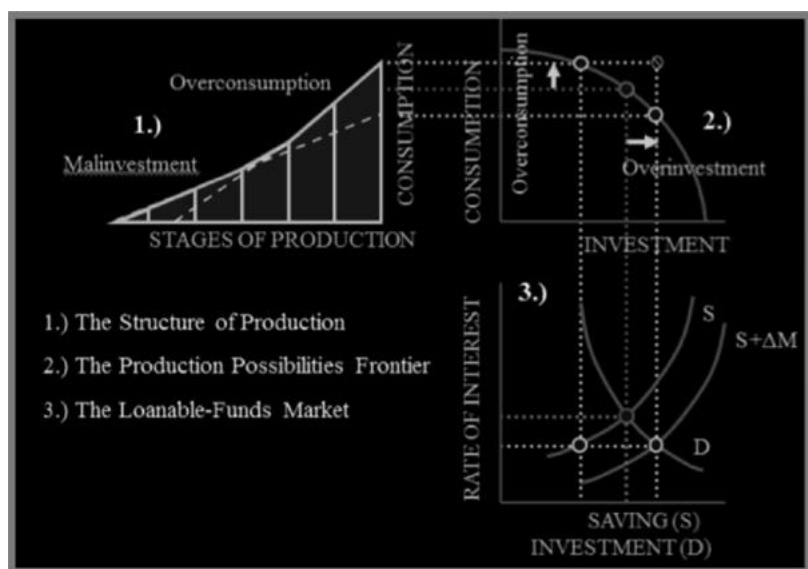
Source: Federal Reserve

To really understand the causes of the latest economic crisis, we must talk about the events and actions which had led to it. In the recession of 2001, after the information technology bubble (the 'dot-com bubble') and after the '9/11' attacks in the USA, the Federal Reserve aggressively expanded the M2 money supply even further, while simultaneously cutting the federal-funds rate, which started in 2001 at 6.25% and ended in the same year at only 1.75%.

Between 2003-2005, the rate was at a historic low of 1%, resulting in a negative real interest rate, as the nominal interest rate was lower than the inflation (Ferrara 2011).

Mentioned artificially low interest rates increase the 'future orientation' of market participants, stimulating investment activities in the early stages. In addition, these ultra-loose monetary policies also increase consumer demand, drawing further resources toward the late stages, which distracts the economy even more. Thus, these 'dynamics of boom and bust' are shaped by both overinvestment (as shown in the PPF diagram) and malinvestment (an unsustainable lengthening of the Hayekian triangle).

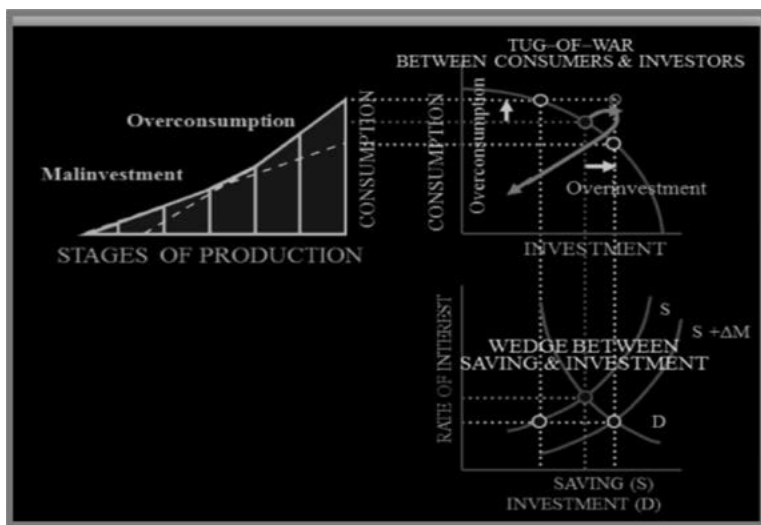
CHART N° 7



Source: Garrison (2001)

a) *Malinvestment, Dueling Triangles-and Consumption-Investment-Ratio*

CHART N° 8
HAYEKIAN TRIANGLE PRODUCTION POSSIBILITY FRONTIER



Source: Garrison (2001)

The situation of ‘dueling triangles’ occurs within the Hayekian Triangle, with a conflicting structure of production, in which mal-investments in the early stages of production (e.g. capital goods) are accompanied by the overconsumption in the later stages of production (e.g. consumer goods). The conflicting stages of production, the wedge between saving and investment as well as the ‘tug-of-war’ between consumers and investors lead to a distortion of the market with significant mal-investments, eventually turning booms into busts, causing recessions and potentially depressions.

6. Understanding the True Reasons for the 2008 crisis

Between 1998-1999, and after the bankruptcy of the hedge fund management firm 'Long-Term Capital Management L.P.' (LTCM), the Federal Reserve System started to aggressively expand the monetary supply. Moreover, in the recession of 2001, after the information technology bubble (the 'dot-com bubble') and after the '9/11' attacks in the USA, the Federal Reserve strongly expanded its M2 money supply while simultaneously cutting the federal-funds rate, which started in 2001 at 6.25% and ended in the same year at only 1.75%.¹ After 12 successive cuts within less than 2 years, the rate stood at only 1.25% by December 2002. This significant decrease was not caused by an increase in the saving rate, as mentioned personal savings rate was at 6.3% in January 2001 and actually decreased to 4.4% by August 2002. Consequently, this shift implies that businessmen had been misled by the monetary policies of that time, which set the stage for malinvestment. Between 2003-2005, the rate was at a historic low of 1%, resulting in a negative real interest rate, as the nominal interest rate was lower than the inflation.

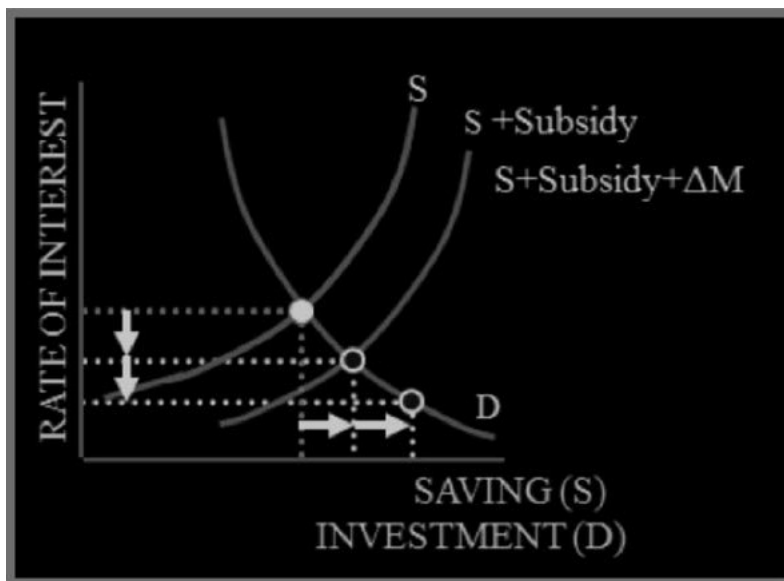
The lower rates in the interbank market were translated by maturity arbitrage into lower long-term rates for all sorts of credits. Between the years 2000 and 2006, the commercial bank Citibank increased its total assets from \$0.9 trillion to \$1.9 trillion, mainly financed by short-term liabilities, whereas long-term debts increased by only \$0.2 trillion. The Bank of America increased total assets by \$0.8 trillion (out of which \$0.3 trillion in loans) whereas long-term debts increased by only \$0.07 trillion. Looking at the main investment banks like Goldman Sachs and Merrill Lynch, they significantly increased their total assets showing high increases of investments into long-term financial assets, but only little increases of long-term debts. Consequently, there was a significant process of maturity mismatching.² Two business areas which were most significantly impacted by this unsustainable growth were the housing and the automotive industry. The hous-

¹ «US interes rates cut again», BBC-News (12 December 2001).

² «The big bank bailout», Forbes (14 July 2015).

ing boom began with an increasingly aggressive housing policy which raised the supply of mortgage loans. The Federal Reserve further increased the supply of loanable funds to avoid reduced lending in other markets as well as to stimulate a recovery from the previous 'dot-com bust'.

CHART N° 9



Source: Based on *Time and Money* (2001) by Roger Garrison

As proven by most scholars of the Austrian School of economics, it is precisely these capital goods industries that suffer the most from the long-term effects of ultra-loose monetary policies and artificially low rates of interest. Consequently, apart from the banks, it was the housing sector and the automotive companies that suffered most throughout the crisis, in some cases filing for bankruptcy and/or requesting public bailout programs from governments to avoid a financial collapse.

In 2006, real estate prices began to level off and as a result, the boom period started to come to an end, as within one year the economic growth rate fell from 2.7% to 1.8%. Consequently, in 2007 the malinvestment became obvious, leading to falling real estate prices (and the financial products which derived their value from housing also lost value), combined with a fall in asset prices.

Therefore, the national default rates increased while the construction industry reduced employment which marked the end of artificial booms and malinvestment in the housing sector.

a) *Role of the Government before and during the Crash*

The crucial role which both government and central banks can play in the creation of an artificial economic boom and the consequently following bust can be perfectly observed in the subprime and mortgage crisis in the USA. Real estate construction, being an 'early stage' in Hayek's concept of the stages of production, was particularly affected — also due to the fact that the Federal National Mortgage Association (commonly known as Fannie Mae) and the Federal Home Loan Mortgage Corporation (known as Freddie Mac), while being publicly traded companies, had been tasked to increase home ownership in the USA — in particular with the political goal to increase ownership rates for the poorer part of society. As White (2008) stated, «the hyper-expansion of Fannie Mae & Freddie Mac was made possible by their implicit backing from the U.S. treasury». To finance this boom, Fannie Mae & Freddie Mac had to borrow huge amounts from the financial markets — which occurred at extremely low interest rates as both government-sponsored companies were 'covered' by implicit government guarantees. In 2008, the US Congress even pressured Fannie Mae & Freddie Mac to increase the purchase of mortgages.

Banks were basically incentivized to give loans to people with poor credit history, precisely because one could already expect that ultimately Fannie and Freddie could buy up the mortgages. Consequently, there was an incentive for banks to provide an artificially high amount of loans.

b) *Has Recovery Been too Fast, or too Slow – or both?*

After the complete abolishment of the gold standard by US-President Richard Nixon, the consequent further stretching of the fractional-reserve banking system by continuously lowering the minimum required reserve ratios, as well as after the repeal of the Glass–Steagall Act in 1999, the banking practices along with monetized subprime mortgages practically sold as no risk investments. After its tipping point in 2008, the following phase was characterized by severely contracted liquidity in the global credit markets and insolvency threats to investment banks and other institutions. In response to that, the U.S. government announced a series of steps which can be justified from a short-term political perspective but which must be criticized from a long-term and economic point of view, such as an unsustainable ultra-loose monetary policy/quantitative easing, as well as several bailout programs for so-called ‘system relevant major corporations and banks’.

Thus, when comparing the Western economies’ status in 2017 with that in 2009, one may say that the economy’s recovery process has been unnatural and unsteady, but also not reaching its full potential precisely because of the intensive monetary policies implemented by the Federal Reserve and the European Central Bank as well as precisely because of the fiscal policies set-up by the European and US governments. Centrally-planned public interventionism prevents the economy from achieving a much stronger economic growth based on actual previous savings and consequent sustainable investments. A short, severe recession followed by a healthy, natural and sustainable recovery without any interventionism by governments and central banks would possibly have been much more efficient from a long-term perspective.

Only 3 major interventions carried out by the US- governments and/or the Federal Reserve that interfered with the US economy’s readjustment process should be mentioned at this stage.

1. Quantitative Easing: Starting in late 2008, after the collapse of the global financial services firm Lehman Brothers Holdings Inc., the Federal Reserve has since then used several rounds of Quantitative Easing to ‘stimulate the US economy’, by growing its balance sheet,

purchasing government bonds and mortgage-backed securities. In November 2008, the first round of QE, also later called QE1, was initiated. Since then several rounds were used for the FED to buy agency debt, mortgage-backed securities while also channelling millions of US-Dollars into longer-dated treasuries. Between the initial QE round (QE1) in November 2008 and the QE3 round in October 2014, roughly \$3 trillion were 'deliberated' by the Federal Reserve. This ultra-loose monetary policy has even increased the distortion of the market, leading the way to further malinvestment, while creating the artificial impression of a strong and growing economy.

2. Bail-outs: In October 2008, US-Congress launched a \$ 700billion bailout program of the U.S. financial system, called the 'Emergency Economic Stabilization Act'.³ Instead of letting uncompetitive banks and those which incurred existence endangering speculation losses simply fail and go into bankruptcy, they were artificially saved with US-tax payers' money. This law, enacted after the subprime mortgage crisis, authorized the US Secretary of Treasury to spend up to \$700 billion to purchase distressed assets, in particular mortgage-backed securities, and simultaneously supply cash directly to banks.

These bail-outs have kept uncompetitive and unsustainable companies artificially alive. Instead of allowing the market to naturally recover and restructure itself, political interventionism helped to distort the market, spending tax payers' money on corporations, simply because from a political short-term perspective, they were considered to be «too big to fail».

3. Consumption Stimulation: In 2009, the American Recovery and Reinvestment Act⁴ was passed in the US Congress, meant as a 'stimulus package' and based on the Keynesian economic theory. Government wanted to 'save existing jobs and create new ones' by counterbalancing the decrease in private spending with an increase in public spending in order to 'stop further economic deteriora-

³ «Congress approves \$700 billion Wall Street bailout», New York Times (3 October 2008).

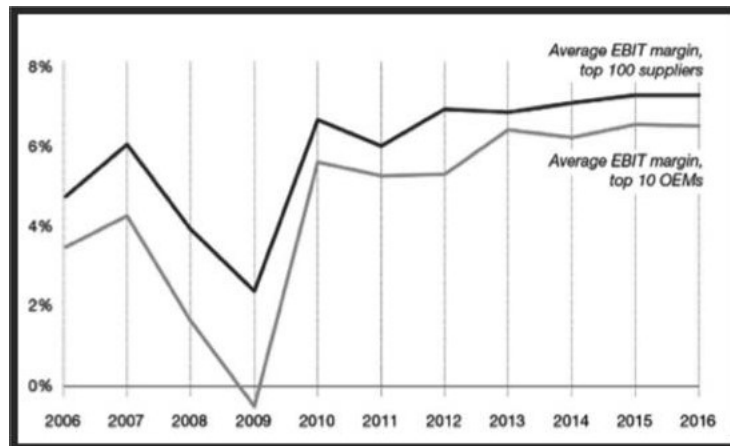
⁴ «The big promise», The Economist (18 August 2012).

tion'. Consequently, this bill aimed to stimulate demand in the economy via consumption — which can be seen as the exact opposite of the Austrian Business Cycle Theory. These actions were based on the Keynesian idea that it is more important to create an increase of consumption than to focus on a natural economic growth based on previous savings and sustainable investments. Instead, these actions led to a socialisation of investments, based on government spending.

4. The Mid-Term Result: the Unexpected Boom after the Crisis

Mentioned interventionist monetary and fiscal policies helped the automotive industry to 'quickly recover' from the crisis. In 2016, worldwide vehicle sales reached a record 88 million units with average profit margins for OEMs at a 10-year high⁵. According to the Center for Automotive Research, automakers spent more than \$108 billion building new factories or expanding existing ones solely in North America between 2010 and 2016.

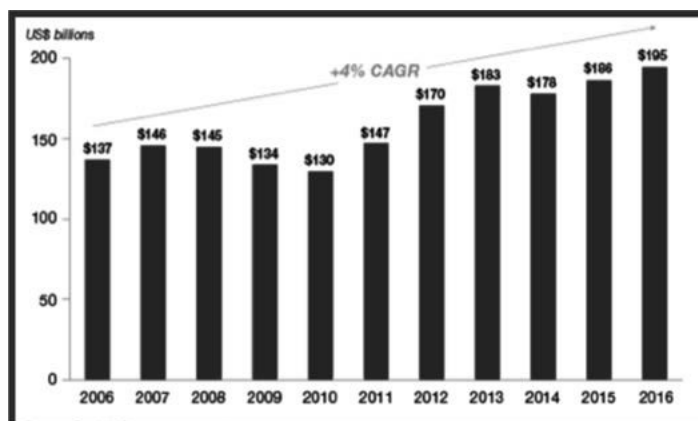
OPERATING MARGINS AT A 10-YEAR HIGH



Source: Capital IQ, company reports

⁵ PwC (2017).

COMBINED CAPITAL SPENDING, R&D AND M&A
OF GLOBAL TOP 10 OEMS



However, more critically viewed, the industry is still far from being in perfect shape, apart from the relatively limited 'total shareholder return' (TSR): Between 2011-2016, the annual rates of return that the S&P 500 and the Dow Jones Industrial average achieved for investors were at 14.8 percent and 10.1 percent respectively. In that period, the average TSR of automotive OEMs alone was only 5.5 percent –making it less attractive for investors to choose the automotive industry. A contraction in vehicle sales volumes can be seen as very likely in the near future, after the long, unsustainable growth of the past years. This growth kept several automotive OEMs alive which would not have been competitive without the recently seen monetary and fiscal policies. Consequently, resources and market share currently 'blocked' by these non-competitive OEMs are therefore taken away from the competitive ones which could actually grow even stronger if there was no public interventionism in the market.

c) *The Bust and Readjustment Period*

As Huerta de Soto (2010) stated regarding the inefficient and ultimately harmful monetary and fiscal policies directly after the recent

subprime crisis, «instead of a crisis that looks like a ‘V’, deep but fast (which is what a truly free market would have produced), monetary and government interventions unnecessarily produced a recession much longer and ultimately more painful». Thus, a crucial aspect after analysing the reasons for the recent crash must also be to evaluate how a sustainable readjustment phase would need to look like.

The decrease of the money supply (deflationary credit contraction) is a key form of recovery, as the consequently falling prices encourage greater savings in the economy and businesses may recover quickly during a recession, as «the» natural rate of interest is lower.

In order to better adapt the rate in financial markets to the natural rate of interest, the Federal Reserve would simply need to cease all open market operations, freezing reserve requirements at current levels, refraining from any further interference. This could lead to a short and sharp recession with a liquidation of unsound firms and investments, but the process of re-adjustment will soon return the economy to a sustainable structure.

d) *Japan vs USA: The effects of expansive monetary policy on local production*

In order to better understand the impact of monetary policies on the automotive industry, we need to evaluate the latest corresponding evolutions within three main Automotive markets, namely the USA, Japan and Euro-zone countries. Whereas a large portion of vehicles produced in Japanese automotive factories (e.g. from Toyota and Mazda) have been sold abroad, most vehicles produced in the USA also remained within the US market. Consequently, US automotive factories have been to a large extent depending on their own local US-market, while Japanese factories have been focusing stronger on production for export markets.

In Japan, the central bank’s expansive monetary policy optimized the competitiveness of local automotive OEMs like Toyota, which produce a significant amount of vehicles in their Japanese factories for export markets. Thus, the corresponding monetary inflation led to an increased competitiveness of Japanese vehicles abroad, as the corresponding exchange rates facilitated the export business. The

economist Gunther Schnabl argues that if the Japanese monetary policy had been significantly more restrictive throughout the past decades, Japanese automotive OEMs, and exporting industries in general, would have become less competitive, as the Yen would have revalued, strengthening its exchange rate. Thus, a «more restrictive» monetary policy might have further transformed Japan from being a relatively export-oriented industrial economy into a country depending even more on its service sector.

Also in the case of the USA, the expansive monetary policy artificially devaluated the local currency (the US-Dollar), but in this case, monetary inflation rather 'helped' to protect automotive producers within the US market, since imports of non-US vehicles in general became more expensive. These policies, like any other form of protectionism, gave an artificial competitive advantage to brands producing within the US. However, over the long term, such protectionism is a major threat to any corporate's competitiveness as it will tend to become more reluctant to optimizing its structures which would be necessary to adapt to market changes and new customer demands. Simultaneously, manufacturers producing abroad were forced to be even more competitive in order to compete on the US market with domestic producers.

e) *Europe: Impact of exchange rates and monetary inflation on competitiveness*

The European market must be seen as a quite different case, split between the Euro-zone and other markets with national currencies. The 'Euro-zone' itself is divided between export-oriented markets like Germany, and other countries which are heavily depending on imports, often without relevant local automotive production. German ambassadors of the Euro-currency argue that vehicles 'made in Germany' have seen a significant increase in competitiveness since the introduction of the Euro which in combination with a generally expansive monetary policy of the ECB have helped to significantly optimize their competitive position. It is argued that the new currency alone already increased the competitiveness of German products within the Euro-zone. Simultaneously, the ultra-loose monetary

policy of the ECB has generally helped to export vehicles produced in the Euro-Zone to markets outside the monetary union due to the caused depreciation of currency. Thus, combining these two factors, in particular industrialized high wage countries like Germany which had had a strong and stable national currency before the introduction of the Euro, would have become more competitive when selling outside the Euro-zone. However, as similar expansive monetary policies have been shaping the strategies of all major central banks across the globe, a general monetary inflation was seen in all major markets throughout the past decades. Moreover, it must be stated that the economic consequences of the Euro introduction have been extremely different between the individual Euro-zone markets. Several industrial sectors and export-oriented companies located in countries like Portugal, Greece or Italy have been suffering from the currency union. Whereas previously, the individual local currencies could be easily devaluated to increase the competitiveness of locally produced goods and services, this former monetary privilege was then given to the ECB (Hanzel & Nölling 2011)

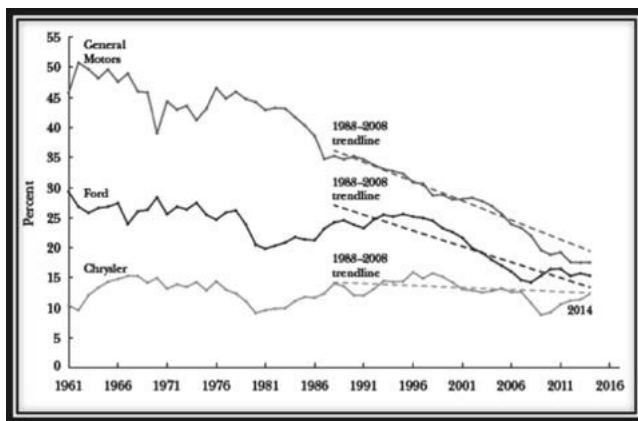
7. The Automotive Industry's Crisis: In-house Management Failures or Victims of Monetary Policies?

Within the US automotive industry, General Motors, Chrysler and Ford have been known as «the big three» for decades, being the three leading competitors. The USA's recession caused by the financial crisis made auto sales plummet to levels not seen since 1994. Simultaneously, the lack of credit available to potential car buyers hampered car sales even more. To get to the correct conclusions, we certainly need to look at the big picture, not only blaming the recent crisis of certain Western automotive OEMs on purely monetary or fiscal aspects. As explained by I. Kirzner (1973) and Huerta de Soto, understanding the concept of dynamic efficiency and the importance of entrepreneurial creativity must be crucial for every corporate management to properly steer and position their company. Already before the start of the economic crisis, most U.S. automakers had suffered from structural and financial problems. In particular the '*Detroit Three*' had experienced harmful internal management decisions as several market

trends were not taken sufficiently seriously, such as the customer's request for fuel efficient vehicles, more safety features and configuration/personalisation options, as well as for a general vehicle segment downsizing at that time and a desire for new technologic features such as 'digitalisation & connectivity'. In a research done by Leonhardt (2008) it is estimated that the average labour costs of the Big Three were approx. 30% higher than those of all transplant car factories (domestic US production of foreign owned companies like e.g. Honda). Moreover, the total cost of retiree health care borne by U.S. automakers was dramatic, putting these OEMs in an even less competitive position. In 2007 and 2008, General Motors and Chrysler had made significant losses, with General Motors alone losing almost \$40 billion in 2007 and another \$31 billion in 2008. Thus, the mentioned automakers' problems had built up over years, clearly before the first effects of the economy's financial crisis were visible.⁶

a) USA: 'Big Three' Automakers' Share of Total Annual US Vehicle Sales

CHART N° 12



Source: Autodata, U.S. Market. Annual passenger vehicle registrations

⁶ «Auto industry bailout (GM, Chrysler, Ford) Was the big 3 bailout worth it?», The Balance (25 April 2017)

However, the economic crisis, mainly caused by monetary and fiscal policies certainly also led to a bust within the automotive market. Annual US auto sales decreased in 2009 to 9.5 million, coming from a peak of 16.5 million in 2006. Former Chrysler CEO Robert Nardelli purely blamed «*macroeconomic forces outside of the OEM's control*» for the company's difficulties, referring to «*a devastating automotive industry recession caused by the nation's financial meltdown*» which led to the problem of «*the buyers' and dealers' lack of access to credit*». ⁷ In 2009, severely hurt by the global financial crisis, General Motors and Chrysler both had to file for Chapter 11 bankruptcy, only surviving due to government bailouts. In June 2009, General Motors Corporation filed for bankruptcy with \$173 billion in liabilities and \$82 billion in assets, but quickly emerging from bankruptcy in July 2009 as two separate companies: 'General Motors Company' and 'Motors Liquidation Company'. In this structure, 'Motors Liquidation Company' (the 'old GM') retained the liabilities (Ramseyer & Rasmussen, 2011), and 'General Motors Company' (the «New GM») held the assets — already «becoming profitable» in 2010. Consequently, one may ironically argue that politically-motivated bailouts and other fiscal policies after the credit crunch tried to save those automotive OEMs whose internal corporate challenges had previously been significantly intensified by the financial crisis. And the financial crisis itself had precisely been caused by the unsustainable increase of money supply and artificial credit expansions caused by the Federal Reserve's ultra-loose monetary policy.

III

FISCAL POLICIES TO COVER MONETARY POLICY EFFECTS: THE SCRAPPAGE PROGRAMS

1. Germany: The Scrappage Campaign «*Umweltprämie*»

Also in Germany, the impact of the local scrappage campaign «*Umweltprämie*» (publically known as «*Abwrackprämie*»), was quite

⁷ «Detroit's big three CEOs, Robert Nardelli, Chrysler», Time (04 December 2008)

significant. Owners of vehicles older than 9 years were entitled for a scrappage premium of €2,500 when buying a new car. The program was launched in January 2009 with an initial budget of €1.5b. As the German car market started to boom with an unexpected increase of 40% (March 2009 versus March 2008), in 2009 the German government decided to continue the scrappage scheme, causing an estimated net impact on the German budget of approx. €5.0b. Brands like Ford, Hyundai, KIA, Toyota, VW-Group, FIAT as well as the French brands significantly benefitted from the program, boosting sales of smaller passenger cars in the A, B and C-vehicle segments. Ford significantly increased sales of the Ka, Fiesta, and Fusion, achieving an increase of 56% in April 2009 (vs April 2008)⁸. On the other hand, local luxury automakers like BMW, Mercedes-Benz, and Porsche had little benefit from the program as the impact of mentioned 2,500€ scrappage premium was likely not relevant enough to stimulate purchases of the corresponding higher-priced new vehicles. However, the further stable evolution of BMW and Porsche showed that OEMs which had been run in a strategic, future-oriented and customer focused way, properly combining entrepreneurial alertness and creativity with efficient cost reduction, can even survive economic busts caused by monetary policies and do not depend on politically motivated, wasteful subsidies.

2. USA: 'Cash for Clunkers'

The Car Allowance Rebate System (CARS), also known as '*cash for clunkers*', was a \$3 billion US federal program to stabilize the US-vehicle market, which had suffered from the financial crisis in 2008. It was promoted as providing a stimulus to the economy, boosting auto sales, while increasing the share of safer, cleaner, and more fuel-efficient vehicles, as the support scheme was meant for US-citizens which intended to purchase 'fuel efficient vehicles' when trading in a less fuel efficient vehicle. The program ran from July

⁸ ACEA — European Automobile Manufacturers' Association : registration data for 2008-2010

to August 2009, when the appropriated resources were exhausted. The initial \$1 billion appropriated for mentioned campaign were exhausted by 30 July 2009 due to the high demand, and consequently US-Congress approved an additional \$2 billion for the program. Depending on the type of car purchased and «the difference in fuel economy between the purchased vehicle and the trade-in vehicle», the total credit given in form of vouchers to eligible customers was \$3,500- \$4,500. The corresponding new car dealers were able to reduce the purchase price by the amount of the corresponding customer voucher.

The scheme resulted in 690,114 dealer transactions, causing a total cost of \$2.877 million. Main profiteer of all OEMs was Toyota, accounting for 19.4% of the total sales, followed by General Motors with 17.6%, Ford with 14.4%, Honda with 13.0%, and Nissan with 8.7%⁹.

In order to justify mentioned government interventionism, the scheme was presented as 'an environment protection campaign to decrease CO2 emissions', and consequently the US Department of Transportation was satisfied to announce that the average fuel efficiency of the trade-in vehicles was only 15.8 mpg, compared to 24.9 mpg for the new cars purchased to replace them. However, researchers at the University of Michigan argued in a research paper that there had already been a trend towards buying vehicles with better fuel economy due to the high gasoline prices of 2007 and 2008. Thus, mentioned scrappage campaign mainly helped to pull-forward the sales of new, fuel-efficient vehicles.

3. Effects of the Scrappage Campaigns

From a Keynesian perspective, the program was required to avoid a liquidity trap in times of economic depression. However, Burton Abrams and George Parsons, both professors at the University of Delaware, stated that for each vehicle trade, the program caused a net cost of approximately \$2,000. In line with this argumentation,

⁹ Detroit News, Automotive News. (August 2009). 'Cash For Clunkers final numbers'

A. Mian and A. Sufi concluded that the program was only able to pull purchases forward — but at a high additional cost. The positive effect during the campaign was directly reversed in the 7 following months when significantly fewer cars were sold. Christopher Westley said «the poor and lower-middle classes» were ultimately suffering most from the consequences of the scheme which led to a price increase of the remaining cars in the secondary market. Moreover, the monetary inflation which was necessary to finance the scheme raised the general price level with the corresponding negative effects — in particular for lower class workers and employees, as shown by the Cantillon effect.

Ambassadors of the bailout programs which rescued General Motors and Chrysler during the financial crisis argue that the negative impact for the US economy would have been worse if mentioned companies had not been saved artificially by government interventionism. A complete failure of these corporates could have led to the bankruptcy of thousands of parts suppliers, dealerships, and other direct service providers. In 2009, and according to the Center for Automotive Research («CAR»), all auto manufacturers and parts suppliers based in the USA directly employed over 1,200,000 workers of whom about 240,000 were employed by the Detroit Three. Another indirect effect of a complete failure of General Motors and/or Chrysler would have been the loss of revenue to state and local governments, caused by the transfer of health care costs from auto manufacturers to Medicare, and the transfer of pension costs to the Pension Benefit Guarantee Corporation («PBGC») (Burr, 2009). In 2009, the Detroit Three had \$100 billion of healthcare liabilities for retirees, spending almost \$13 billion annually on pensions — which in the case of a complete failure of these corporates would partially have to be covered by the PBGC. Another relevant aspect is the country's foreign trade balance, as in 2009 the value of exported automobiles, parts and engines made up approx. 7% of the USA's total exports. Therefore, the combination of lost exports and increased imports would have had a significant adverse effect on the USA's already significant balance of trade deficit.

However, these arguments seem to miss the real fundamental aspects, crucial for a properly working, sustainable economy,

which are the concepts of «dynamic efficiency», «entrepreneurial creativity» and the «impossibility of centralized governmental interventionism» defined by von Mises, Hayek, Kirzner, Huerta de Soto and other relevant economists of the Austrian school of economics. Even if the US automotive industry, including its parts suppliers, dealerships and other service providers, would initially suffer from an OEMs failure, the market would naturally recover if the natural demand for these services is given and if the mentioned market players are truly competitive on the global stage. The mentioned costs related to health care and pensions, which would potentially partially be transferred to the PBGC and (other) public institutions, would be a severe burden, but must rather be immediately stopped due to their inefficient costly structures, rather than using costs and risks of these failed services to further justify inefficient bailout projects for uncompetitive corporates. As Huerta de Soto stated, *«the market is very agile and quick to detect errors, spontaneously setting in motion the necessary investment processes to meet the unavoidable restructuring as soon as possible and with minimal costs»*.

Even playing 'the national card', by arguing that it is vital for an economy to maintain its major corporates alive, does not make sense from a long-term economic perspective. The natural evolutionary process within any market must not be stopped nor distorted by public institutions. Consequently, those companies which have made the proper decisions are much more likely to survive even within a very competitive environment, while companies which did not detect market changes and niches, while producing in an inefficient costly way, are likely to disappear over the long run.

It is not only economically efficient, but also morally accurate, if the market consequently rewards companies which make better products at competitive prices, while companies which make undesirable products at high cost lose profits and market share. Companies, including automotive OEMs, which cannot compete in the market must naturally disappear. What definitely needs to be stopped is the politically motivated concept of constantly helping major corporates considered 'too big to fail' — helping them to

socialize their losses in economic crisis through fiscal and monetary policies.

IV A CONSEQUENT AND RESPONSIBLE APPROACH TO SUSTAINABLE MONETARY POLICIES

Several Austrian School economists argue that the very root of the problem needs to be detected, instead of only covering the symptoms. Consequently, Huerta de Soto and other 'Austrians' insist that the following key aspects must be considered as essential to entirely resolve the economic challenges caused by the recent boom-and bust cycles:

- First, the abolishment of the current fractional reserve banking, consequently establishing a banking system subject to a 100% reserve requirement on all bank demand deposits and equivalent. This approach would stop the current artificial credit expansions, limiting the risks of artificial booms. Loans could no longer be granted by simply creating new credits and instead would have to originate from real savings.
- Second, the suspension of the current structure in which central banks act as lenders of last resort should be targeted. Under free banking and a 100% reserve requirement, a lender of last resort would no longer be necessary. In this scenario, a central bank influencing the interest rate and money supply is no longer necessary and the central banks' complete elimination would be a logic step.
- Consequently, the privatisation of the current monopolistic state-issued money. Privatisation will ensure that money supply is under the control of business enterprises which will only be able to make constant, long-term profits by providing a stable and competitive currency in the free market. Maturity mismatching would be restricted and currency competition would be possible. This process shall be linked to the replacement of the current fiat money system by a commodity standard, e.g. the classic gold standard.

Even if the suggested changes might reflect the ideal scenario from an 'Austrian point of view', their implementation will be extremely difficult. The exact economic — and consequently political — effects throughout such transition period cannot be fully foreseen, and this uncertainty would bear significant risks for current governments to possibly be re-elected. Consequently, it is highly unlikely that those currently controlling the political and financial system will be willing to sacrifice their current own privileges, supporting the implementation of a radically different social order.

Thus, 'pragmatic ways' to improve the monetary policies must be defined, while accepting that current monetary institutions are likely to stay in place within the foreseeable future.

First of all, we need to assure that monetary policy makers need to intend to minimize malinvestment and the loss of capital by pursuing a more restrictive monetary policy, in particular once artificial stock booms begin.

Central banks such as the ECB and the Federal Reserve need to pursue a much «stricter» monetary policy to avoid artificial booms caused by credit expansion and maturity mismatching. Alonso, Bagus and Rallo (2012) suggest that central banks should only buy securities of very high quality, restricting the range of acceptable collateral to short-term high quality assets. The exaggerated expansion of credits and money supply must be avoided as this will also prevent credit contraction, and shall avoid banks from believing that they can continuously expand credit, while not being responsible for their own debts and mismanagement.

One may critically add that several 'pragmatic approaches' by Austrian School economists on how to optimize monetary policies within the current monetary system (in which the government monopoly on money production and the existence of central banks are accepted), may seem like «monetarism with an Austrian twist». However, the crucial impact of the rate of interest, the heterogeneity of capital and the existence of the different stages of production as well as a general rejection of any «too big to fail bailouts» must carefully be considered for the definition of a realistic, but better future monetary policy concept.

1. Deflation: A Useful Alternative?

As quoted by J.G. Hülsmann, price deflation can be caused by economic growth with increased production and higher supply of services and goods, often linked to technological advancements and lower production costs. Moreover, an increase of money demand within a free market with commodity money system would lead to deflation as the 'money's' purchasing power increases. This can, for example, be related to a (perceived) quality increase of the specific money or purely to speculation. In a rather interventionist system with fiat money, such deflation could also be achieved by decree or coercively, for example through confiscatory means. Apart from, looking at historic scenarios, we want to see which effects a potential upcoming deflation could have for the economy and the automotive industry in particular.

It is often argued that falling prices hurt companies as deflation will lead to a decrease in sales, lower company turnovers and profits, consequently leading to a lay-off of employees. A similar argument, but from a consumer perspective, is that the pure expectation of falling prices will depress consumer demand and the economy in general.

In particular regarding certain final consumer products such as food products or motor fuel, this argumentation is seen as invalid, as there simply is a constant need for these goods and services which cannot be delayed for a significant amount of time.

Even in regards to high-technology products, the customer expectation of falling prices, caused by the constant, technologic advancements and introductions of improved new models, have not stopped these consumers from spending significant amounts on computers, mobile phones and similar goods. In this case, the universal law of time preference has certainly helped to assure strong sales, as most customers avoid using a potentially outdated product. However, this aspect might not be equally relevant for other goods or sectors, in particular for high-priced goods which are on average only bought a very few times throughout a consumer's life time, such as real estate and automobiles.

In our research we want to look at the automotive industry, which starts its manufacturing process at the early stages of

production (Hayekian Triangle), for which significant investments into capital goods are needed. In the European Union, the average holding period of vehicles by their first owner is approximately 6-7 years. Therefore, consumers may delay planned vehicle purchases by several years due to turbulent economic times, as seen during the financial crisis (the so-called 'real-estate bubble') in Spain in the period from 2008-2010. Moreover, we argue that at least in our current fiat money system, deflation will lead investors to rather invest in consumer goods/the 'later stages of production, rather than into capital goods and the 'early stages of production'. Moreover, it will be argued that the positive long-term effects of deflation could only be seen in a truly free market without fiat money, where it will ultimately help to restructure the economy. In particular the automotive market, with its current production over-capacities, could become more sustainable by the possible elimination of non-competitive, highly-indebted companies, leaving market space and resources to the more competitive and sustainable manufacturers.

Manufacturers need to initiate the purchasing process of commodities/parts used for their vehicle production several years before the vehicle is fully produced and finally sold to the consumer. We may assume a total time frame of 3 years (2017-2020) between the purchase of commodities and parts from suppliers up to the actual sale of the produced vehicle to the final customer. In case of a constant annual deflation of 2%, a commodity bought for 100€/kg in 2017, would only cost 94.1€/kg in 2020, when the vehicle is actually sold to the consumer. This alone does not need to be a crucial aspect for an OEM competitive position, assuming that all competitors are equally affected. First of all, the produced vehicle will be 'a completely new good' whose 'value' cannot be directly linked to the individual costs of the separate commodities used to produce it. Secondly, all manufacturers always attempt to pass occurring costs to the customer and will even try to keep the vehicle sales price stable. By including additional features, e.g. new safety or technology features, new colours or accessories, vehicles can constantly be 're-launched' and 'personalized' making them more immune against deflation than it is the case for less sophisticated products. In this case, automotive OEMs' revenues might

even increase relatively to the costs, if prices of the purchased commodities/parts fall more significantly than prices of the OEMs' end products (vehicles). If all automotive OEMs are equally affected by these external factors, no manufacturer will have any competitive advantage or disadvantage. As stated by Rothbard «*what matters for business is not the general behavior of prices, but the price differentials between selling prices and costs.*»

Moreover, as Philipp Bagus (2015) argues, if consumers abstain from consumption for a longer period of time, the decreasing sales prices will urge manufacturers to optimize their processes, becoming more alert for market niches, while also mainly increasing efficiency by reducing unnecessary costs. This will urge OEMs to replace workers with machines in order to increase efficiency. This would lead to investments into the capital sector, creating employment in the capital goods sector. Consequently, companies are expected to focus even more on optimizing efficiency and competitiveness in times of deflation. However, the relative cost increase of raising a credit in times of deflation is an entrepreneurial challenge for this hypothesis which we will analyse at a later stage of this chapter.

J.G. Hülsmann (2008) confirms that deflation will increase real savings, as people are likely to reduce consumption in certain sectors, expecting a further decrease of prices. As we learned by the Austrian Business Cycle Theory, real savings are essential for a future sustainable economic growth. Thus, the increase of savings will ultimately lead to sustainable growth (Cochran, 2015).

Paul Krugman raises another aspect against deflation, mentioning the current 'stickiness' of labour costs in most industrialized countries, in particular in Western Europe. In an 'ideal world', based on a free market scenario, labour conditions and salaries of the employees could be regularly updated and adjusted, based on the company's operational result, inflationary compensations or salary adaptations due to deflation.

However, in today's heavily regulated labour markets with significant government interventions and other powerful institutions such as unions and workers councils, salaries appear to be relatively sticky downwards. Thus, in particular in the automotive industry in which a significant amount of workers is 'organized',

being 'protected' by labour unions, salaries of employees with permanent contracts appear to be extremely sticky, showing a downward nominal wage rigidity. Consequently, P. Krugman argues that renegotiating existing (permanent) contracts, with the aim of reducing previously agreed salaries, seems to be very challenging. Therefore, current rigid labour markets on the one hand, and the structure of most employment contracts on the other hand, appear to be a real challenge for corporates in times of long-term deflation, as most labour costs cannot be quickly harmonized and equalized with a potentially decreasing company turnover, caused by deflation.

Other costs which, at least from a short-term perspective, are even more fixed than employee salaries are debts. Creditors will receive payments with a higher purchasing power of money, while relative cost of a debt will increase for debtors during deflation. From a general economic perspective, the losses of the debtor are balanced by the profit of the creditors. This will lead to a re-distribution, but the general production potential of the economy will not be hampered. Thus, such redistribution will not have an impact on the overall economy. However, during deflation the relative debt burden of debtors will increase, if seen in relation to the expected negative evolution of the turnover. Keynesians and Monetarists argue that such increase of the relative debt burden will stop companies from investing into future projects as it will become more difficult to repay the debts. If this was the case, it would also have negative long-term effects on the economy from an Austrian perspective, as necessary investments e.g. into research or the purchase of new capital goods would possibly be postponed by companies which are speculating on a new inflation at a later stage.

However, a relative increase of the debt burden caused by deflation can also be seen as a 'filter' which assures that the amount of unsustainable investments will be minimized. Even if the increase of the relative debt burden and a possible decrease in profit due to reduced sales volumes might lead to the bankruptcy of some automotive OEMs, this is not expected to have a negative long-term impact on the overall economy. It is likely to be the least

competitive OEMs with unsustainable structures to suffer in times of deflation.

Bankruptcies of uncompetitive companies play an important and positive role in a functioning free market as they shift the control of resources and factors of production to those competitors which are most capable of using them to satisfy consumer needs. Overall, there will not be a change in the economy's productive capacity in the long term. Bagus and M.N. Rothbard agree that a natural deflation process can have a positive impact on an economy, helping to restructure it in order to become more efficient and sustainable. Not surprisingly, mainly those market participants that expect to make significant (disproportionate) losses in times of deflation are the ones that most strongly defend a constant inflation — even if it is caused by an unsustainable growth of the money supply. Generally speaking, it is mainly banks, governments and highly indebted companies which benefit from inflation — also due to the previously explained Cantillon Effect. Bagus insists that price deflation is not a general economic problem, as falling prices only lead to redistribution. For the automotive industry, a long-term price deflation would cause several challenges but could help to restructure the sector, to become more efficient. The current production overcapacities in the automotive sector mainly exist because several uncompetitive, highly-indebted OEMs have artificially been kept alive by (government subsidies and) ultra-loose monetary policies. After the elimination of non-competitive companies, it will be possible for sound competitors to fill the created gap. Thus, falling prices in a free market, potentially caused by economic growth, do not cause a threat to the general economy. It should be pointed out that in a truly free market, price deflation would be a natural process during economic growth caused by more efficient production processes with technological advancements. Rothbard (1994) stated that the only economically truly harmful deflation is compulsory monetary contraction by the government. The global economy has seen a significant increase in productivity throughout the past decades, not only in developing countries but also in Western economies. Only the constant increase of money supply within the fiat money system has

prevented the natural occurrence of a price deflationary period throughout the past decades.

V

CRITICISM TOWARDS THE ABCT

1. Jörg G. Hülsmann on the Hayekian Triangle

Also the German economist Hülsmann (2011) added significant value to the discussion about the Austrian Business Cycle, developing on the basis of initial ideas by Rothbard (1993) and Fillieule (2005) a revised analysis of the relationship between savings, the interest rate, and the length of the structure of production. Hülsmann points out that the Austrian approach has been too restrictive in its focus on one single scenario of modifications of the structure of production. Hülsmann's critique focuses on the impact that variations of the demand for present goods have on the structure of production as well as on his argument that the conventional model suffers from a basic misconception pertaining to the relationship between the 'Pure Rate of Interest' (PRI) and the roundaboutness or length of the structure of production. He criticised the Hayekian Triangle, stating that it is not entirely correct because spending in the last stage is not zero, even if only original factors are used.

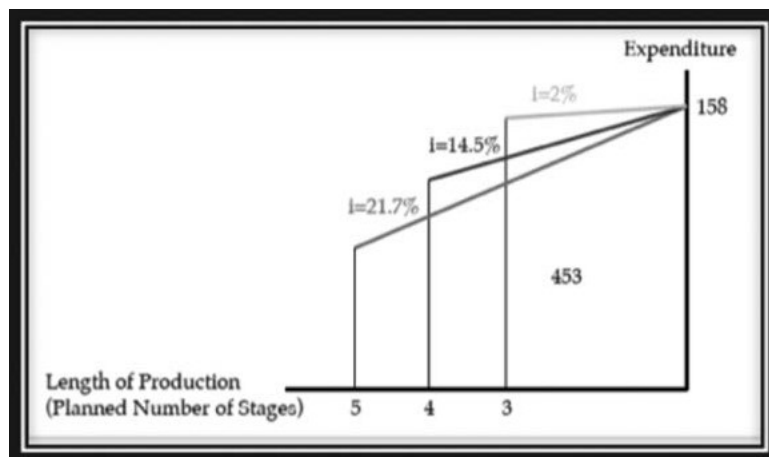
Hülsmann proposes to use the concept of Rothbard who had modified the Hayekian Triangle into a trapezoid. Hülsmann states that in reality, cost expenditure in the last stage of production are positive, and these expenditures can be quite substantial from an aggregate point of view, in particular in highly industrialized markets. Hülsmann explains that the economy can grow based on higher savings, even if there is no variation on the side of monetary factors. Thus, Rothbard's trapezoid representation of the time structure of production must be seen as preferable to the Hayekian triangle.

Hülsmann focuses on the impact that variations of the demand for present goods have on the structure of production. The conventional Austrian model focuses on the impact of an increase of the

supply of present goods (savings) on the time structure of production, assuming that the demand for present goods remains constant, which is not always the case in the real world. An increasing demand for present goods (savings) at a given supply of present goods will lead to a higher 'Pure Rate of Interest' (PRI) and a higher volume of savings causing, a higher volume of investment expenditure.

As argued by Hülsmann, the 'conventional Austrian growth scenario', relies on the wrong assumption that two crucial variations always occur simultaneously: a drop of the PRI and a consequent increase of gross savings — and vice versa

CHART N° 13 — DESIGNED BY HÜLSMANN
HÜLSMANN'S TRAPEZOID: «A LOWER INTEREST RATE (WITH
FIXED TOTAL SPENDING) SHORTENS PRODUCTION»



Hülsmann argues that the conventional model suffers from a misconception regarding the relationship between the PRI and the length of the structure of production. The conventional Austrian theory of interest assumes that an increase of the PRI tends to lead to a shortening of the structure of production. Hülsmann argued that in the case of fixed total spending (fixed money supply with

unchanged demand for money), falling interest rates will actually lead to a shorter production process. In other words, increases of the pure interest rate tend to lengthen the structure of production. Hülsmann argues that if money supply is stable — and with an unchanged demand for it — a lower discount rate will be followed by less money being available in the early stages and more spending in the final stages, which can be summarized with the conclusion that in this scenario lower interest rates decrease the length of production processes. What needs to be critically mentioned is that in this scenario the monetary conditions remain stable even though changes in the demand for money or in the money supply can certainly affect the distribution of revenues and therefore also the structure of production.

2. The Multiplicity of Interest Rates versus the 'Natural Rate of Interest'

Friedrich Hayek's *Prices and Production* (1931) was an elaboration and extension of von Mises' theory on the trade cycle. Following von Mises, Hayek argued that unsustainable boom periods are caused by banks charging a money rate of interest lower than «the natural rate» of interest (Murphy 2006). In its well-known standard form, the Austrian business cycle theory (herein often abbreviated as 'ABCT') has generally focused on the distortions in the structure of production related to lowering «the market rate of interest» below «the natural» rate.

As initially stated, we shall distinguish between a so-called 'natural rate of interest' that reflects the return on investment, and a 'market rate', which reflects the borrowing costs of funds charged by the banks. If the market rate is below the natural rate, companies borrow to invest and the economy expands (Salerno 2016).

Based on this concept, Hayek then stated that low interest rates stimulate borrowing from the banking system, leading to an expansion of credit.

Even if Mises was aware of the fact that there is a multiplicity of interest rates in the real world, which may depend on the length of the loan and the perceived risk of default, this aspect is often not

sufficiently considered. Thus, even Austrian school scholars often purely focus on the contrast between «the market rate» and «the natural rate of interest». Already back in 1932, Piero Sraffa criticized this simplified explanation, making the observation that there is no such thing as «the» natural rate of interest in any economy outside of a (so-called) 'steady-state equilibrium'. Consequently, Sraffa stated that Hayek's idea that banks shall set the money rate of interest equal to «the» natural rate of interest was incorrect.

Thus, one may ask how Hayek and Mises could claim that the boom-bust cycle is mainly caused by a money rate of interest lower than «the natural» rate, if outside the 'Evenly Rotating Economy' (ERE) there are a variety of «natural rates», meaning that there are as many natural rates as there are commodities.

Hayek responded that when commercial banks flood the loan market with artificial credits, producers are often dazzled by 'cheap credit', erroneously beginning projects which are unsustainable. Hayek complains that banks cause a divergence of the money from the equilibrium rate of interest, he simply points out the fact that the false interest rate leads to a distortion of the intertemporal coordination between producers and consumers. Still, one must critically argue that Austrian economists have not been able to fully resolve the challenges raised by Sraffa. Not only Ludwig von Mises continued to refer to «*the originary rate of interest, corresponding to the uniform premium placed on present versus future goods*», but also Murray N. Rothbard treated in his *Man, Economy, and State* (2004), the possibility of different commodity rates of interest as a disequilibrium phenomenon that would simply be eliminated through entrepreneurship.

In this regard, it is argued that Austrians should develop an equilibrium construct that is more robust than von Mises' «evenly rotating economy» (ERE) — while using a more general notion of dynamic equilibrium, considering that consumer preference and technologies as well as the supply of resources can certainly change over time, but may still be properly anticipated. Consequently, as stated by Robert Murphy, by loosening its equilibrium construct allowing changing conditions, the Austrian economists' Business Cycle Theory could potentially be further improved. In

Murphy's 'dynamic equilibrium' the spot prices of most goods and services may change over time, which means that economists cannot refer to «the» natural or «real rate of interest in the economy». In this suggested dynamic equilibrium construct, variables such as spot prices and quantities change over time, but in a predictable manner which does not allow pure profits. The «real» interest rate so computed, would consequently differ depending on the consistence of the corresponding commodity basket. In addition to moving from the ERE to a dynamic equilibrium construct, Murphy urges Austrian economists to also refine their standard dichotomy between pure interest and pure profit if they want to adequately analyse financial markets, but also, to deal with the fact that an investor might gain a significant return which was rather achieved by 'accident' than by entrepreneurial foresight.

3. The Austrian Business Cycle Theory and the Limitations of Empiricism. Discrepancies between the Concepts of Praxeology, Econometrics and ABCT

Ludwig von Mises must be seen as one of the major contributors to the Austrian School of economics. Mises developed Praxeology as an '*a priori* science, the science of human action', pointing out that the analysis of human action must not be a purely empiric evaluation with historic data. Mises (1996) assumed that historical events are heterogeneous and must not be generally used to construct laws of history. Moreover, the concept of dynamic efficiency and the criticism of the neo-classical concept of «perfect competition» must also be seen as key elements of the Austrian School of economics. In the neoclassical model, the market process mainly consists of recognizing what is generally already known, and then simply acting upon it, ignoring the fact that resources and technology are not «given constants» in the real world, but both can significantly change due to entrepreneurial actions. Israel Kirzner (1973) defined a detailed alternative to the unrealistic approaches of the neo-classical school, emphasising on seeing competition as a constant process in which alert and creative entrepreneurs intend to detect market niches and other business opportunities to

optimize customer satisfaction, market share and profit. Within the recent automotive industry's history, the former CEO of Fiat Chrysler Automobiles, Sergio Marchionne, can possibly be seen as one of the most creative and successful managers. Marchionne led the 'turn-around' of 'Fiat Group' to become one of the fastest growing companies in the auto industry. Marchionne was appointed as CEO of former 'Fiat S.p.A.' in 2004 at a time when Fiat was highly indebted and uncompetitive. In June 2009, when Chrysler emerged from Chapter 11 bankruptcy protection, Fiat Group received a 20% stake in Chrysler Group and Marchionne was also appointed its CEO, replacing (the unsuccessful) former CEO Robert Nardelli. Less than two years later, Chrysler returned to profitability, repaying its government loans and in 2014, Fiat and Chrysler merged into 'Fiat Chrysler Automobiles', the seventh-largest automobile manufacturer in the world. This example shows the relevance of entrepreneurial creativity, of how certain individuals can realize and discover (in Latin: *'inprehendo-endi-ensum'*) new opportunities, taking new paths.

Coming back to the methodology of praxeology and the concept of dynamic efficiency, both do not believe that historic data can assure a proper forecasting of future market changes. Humans evaluate things differently, and they constantly learn, changing priorities while making experiences and gaining new knowledge. Consequently, all human actions are unique, which ultimately explains why also entire markets constantly change.

However, in regards to the explanation of the Austrian Business Cycle Theory, even scholars of the Austrian School of economics often refer to specific «stages within the boom-and-bust cycle which can already be detected in advance». Consequently, by anticipating the exact sequence of events during the next «boom-and-bust cycle», generalizations are often used on how «the investor» is supposed to react at which particular point in time during the cycle. In these explanations of the cycle, it is often argued that «the market participants do not realize certain market distortions», or that «the investors do not understand» the corresponding 'warning signals' quickly enough. Some descriptions of the general ABCT are giving such precise forecasts on what different market participants are expected to do in which sequence, that it seems

hard to combine the idea of foreseeing the exact processes of business cycles simultaneously with the concepts of praxeology and dynamic efficiency. Therefore, we want to analyse whether there is a contradiction between mentioned individual concepts related to Austrian school of economics, such as the concepts of praxeology and dynamic efficiency on the one hand and the defined staged of the boom-and-bust cycle (caused by artificial money supply expansion) on the other hand.

Mises pointed out that the analysis of human action must not be a purely empiric evaluation with historic data, as he criticized the use of empiric laws to forecast economic developments. In line with von Mises, also Lachmann focused on a subjectivist approach, emphasising «on the spontaneous, and thus unpredictable nature of human action and the rejection of mechanistic notions of time and probability». Mises stated that each historical event is a complex resultant of a shifting variety of multiple causes, none of which ever remains in constant relationships with the others. Consequently, every historical event is heterogeneous and cannot be used to construct laws of history. According to Mises, there can be many similarities between historic events, but no homogeneity, for which no scientific laws can be derived from these events. Rothbard even argues that it is the praxeologist who is «truly empirical» because he recognizes the unique and heterogeneous nature of historical facts — unlike self-proclaimed «empiricist» who ignore the independent, unique facts of history by attempting to reduce them to quantitative laws.

4. Dynamic Efficiency and Entrepreneurial Creativity

Unfortunately, throughout the 20th century, the emergence of mechanical physics and the use of the mechanical physics rationality in economics hampered the creative dynamic dimension of economic efficiency, leading to the static approach (Huerta de Soto 2014). In 1909, also Leon Walras, confirmed in his *Economics and Mechanics* that the mathematical formulas used in his book *Elements of Pure Economics* were mainly identical to those applied in

mathematical physics. In the neoclassical model, economic efficiency is mainly based on a mathematical concept. Economic efficiency is manifested by a simple mathematical extraction of «the optimal result». In the neoclassical model, the market process basically consists of recognizing what is generally already known, and then simply acting upon it. Thus, in reality, this model of ‘perfect competition’ represents a state of affairs where competition has actually ceased, where all relevant knowledge has been discovered and fully transmitted. Hence, this model entirely fails to explain the emergence of market efficiency. What the static concept of efficiency and most followers of the neo-classical idea fully ignore is the fact that resources and technology are not «given constants» in the real world, but both can significantly change due to entrepreneurial actions.

Competition is a competitive process, a series of competitive acts and steps taken by competing enterprises/entrepreneurs, influencing prices as well as service and product quality. In Kirzner’s view, an efficient economic order and sustainable, long-term growth cannot be achieved in a market with centralized public interventionism, but instead it can only be assured by the absence of any centrally planned economy. Etymologically, the word «entrepreneurship» has its origin in the Latin term ‘*inprehendo-endi-ensum*’, meaning «to discover» and «to realize», as entrepreneurship must be seen as human’s ability to realize opportunities for one’s own profit, acting in order to take advantage of them (Huerta de Soto 2014). Israel Kirzner focused on the vital role of entrepreneurial alertness and creativity, arguing that «it is the entrepreneurial element that is responsible for our understanding of human action as active, creative, and human — rather than as passive, automatic and mechanical». Also Jesus Huerta de Soto emphasized the concept of dynamic efficiency, the need to detect market niches and new opportunities in a constantly changing market environment.

Kirzner stated that the entrepreneurial opportunities to create profit are mainly due to previous entrepreneurial errors that had occurred at an earlier stage, which had then resulted in a shortage or surplus of certain services or goods, or other ways of

misallocated resources. It is then up to the entrepreneur to discover these opportunities.

To summarize the findings on this topic, several *a priori* truths can certainly be detected without the need to evaluate empiric data. These *a priori* laws of human action (Rothbard 2011) include findings such as *'every human action is aimed at an improvement over what would have otherwise occurred'*, or *'people prefer a larger quantity of a good over a smaller quantity'*, or *'if the price of a good is lowered, then either the same quantity or a higher quantity of the good will be bought'*, or *'market prices fixed below market clearing prices lead to shortages'*, or *'if the amount of money is increased, without increasing the quantity of real goods, social wealth will not increase while prices will rise'*. Consequently, the simple fact that artificial credit expansion is unsustainable, for which it will ultimately lead towards a financial crisis, can also be seen as an *a priori* truth. The individual steps demonstrated in the boom-and-bust cycle explained by the Austrian Business Cycle Theory have proven to be true, not only during the US-American financial crisis between 2007-2009, but also during the simultaneous so-called 'real estate bubble' in Spain. However, people constantly learn, gaining new knowledge by making experiences. Thus, it is unlikely that a potential future crisis will happen in the exact same way it did throughout the past decade. The relevance and impacts of dynamic efficiency, as well as the importance of knowledge for all market participants and the consequences of entrepreneurial creativity must not be ignored nor underestimated. The findings made by investors, consumers and depositors during the mentioned financial crisis will shape their future actions and consequently their behavior during upcoming business cycles. It can therefore be concluded that every historic event, including financial crisis caused by monetary policies, are unique. This however does not change the fact that the general findings of the Austrian Business Cycle theory are in line with the *a priori* laws of human actions as described before.

VI CONCLUSION/SUMMARY

Throughout the past decades, the monetary policies of central banks such as the Federal Reserve and the ECB as well as the fiscal policies of the corresponding national governments aimed at an active and constant steering of the economy to assure economic growth, employment and political stability. Monetary instruments were actively used, with the official aim to prevent recessions. However, precisely this form of interventionism has been the main reason for the recent boom-and-bust cycles which have led to severe economic crisis and recessions.

Throughout his lifetime in the 20th century, F.A. von Hayek, winner of the Nobel Memorial Prize in Economic Sciences, had already properly stated that *«the curious task of economics is to demonstrate to men how little they really know about what they imagine they can design.»*

The neo-classical approach of many governments and central banks throughout the past decades, the abolition of the Gold Standard, the introduction of the so-called «fiat money system», the fractional reserve banking system as well as several expansive monetary policies have all played a relevant role in creating the recent economic busts seen in particular in the period from 2007-2009. Mentioned ultra-loose monetary policy in combination with the current fractional-reserve banking system must therefore be blamed for having created monetary and credit bubbles which led to expansive-recessive economic cycles, as seen during the recent financial crisis. Previously, in the US-American recession of 2001 after the information technology bubble (the 'dot-com bubble'), the Federal Reserve had aggressively expanded the M2 money supply even further, while simultaneously cutting the federal-funds rate, which started in 2001 at 6.25% and ended in the same year at only 1.75%. Between 2003-2005, the rate was at a historic low of 1%, resulting in a negative real interest rate, as the nominal interest rate was lower than the inflation. Thus, credit expansion which led to the recent financial and economic crisis must be seen as a *'prime example of malinvestment'*.

The artificial expansion of credit without prior backing by real savings, led to unsustainable investment in the early, capital-intensive stages of the production process. In the recent financial crisis of 2007-2009, this process could best be seen in the housing market, in particular in the USA and Spain. Mentioned financial crisis led to a general economic crisis affecting also other business sectors.

In regards to the automotive industry, it would not be objective to only blame monetary and fiscal policies for the seen crisis of several Western automotive OEMs such as General Motors, Chrysler and SEAT. One may argue that the constant overcapacities of mentioned OEM factories, even before the mentioned financial crisis, had given a signal that in several Western markets vehicle supply had already been higher than its natural demand — and that several automotive brands should have previously started with significant internal structural changes to become competitive again.

In the analysed years between 2000-2007, the Federal Reserve's monetary policies helped to cover the OEMs' own in-house problems, artificially stimulating consumption and investment. However, the recent financial crisis, caused by monetary policies, led to a significant market decrease within the automotive market, causing profit collapses and existence-threatening scenarios for mentioned corporations within a few months or even weeks. Thus, it can be said that fiscal policies implemented between 2009-2010, such as government-funded scrappage programs in the USA, Spain, Germany and several other markets, simply tried to save precisely those automotive OEMs whose previous internal management failures had been intensified by the mentioned financial crisis. And the financial crisis itself had been caused by the previous unsustainable increase of money supply and artificial credit expansions caused by the Federal Reserve's and ECB's monetary policies.

It is not only economically efficient, but also morally accurate, if the market consequently rewards companies which make better products at competitive prices. The 'too big to fail' concept which made governments save banks and automotive companies in order to «protect jobs and to help-out system-relevant corporates» must be entirely stopped. The current production overcapacities in the

automotive sector mainly exist because several uncompetitive, highly-indebted OEMs have artificially been kept alive by government subsidies and ultra-loose monetary policies. With new competitors, mainly Chinese brands such as Great Wall, entering the European and US-American markets, these overcapacities might get even more severe.

It is argued that without any form of government interventionism, the market would always naturally readjust to the real demand situation. This scenario would be cheaper for all affected taxpayers, more efficient for consumers and would ultimately lead to a fairer competition in the market. The history of the former Italian 'Fiat S.p.A.' (Fabbrica Italiana Automobili Torino), which was then succeeded by Fiat Chrysler Automobiles (FCA) in 2014, is an excellent example of how public interventionism/protectionism can destroy a company's striving for competitiveness, while the entrepreneurial creativity of a company's management, namely Sergio Marchionne, can then re-establish its profitability by detecting market niches and customer needs. However, it must also be taken into consideration that expansionary monetary policies and a noticeable devaluation of the local currency provide a competitive advantage for export driven companies, which has already been the case for several automotive OEMs, such as Toyota in Japan. Consequently, not only in Japan, but also within the Euro-zone, automotive OEMs strongly producing for export markets outside of their own currency zone, have benefitted from such currency devaluations, caused by an increase of money supply.

To summarize, it is argued that the mentioned monetary and fiscal policies have been a harming market distortion which have caused significant financial redistribution and bureaucracy, not being backed by the actual consumer demand. We may therefore conclude that, just like in the case of monetary policies, also in regards to fiscal policies, market distortions caused by public interventionism has mostly led to negative long-term results, often ending in economic crisis. Consequently, a truly free and efficient economy would give the individual market participants the freedom to discover for themselves the relevant range of business opportunities. Or to close with the words of Carl Menger: *«man himself is the beginning and the end of every economy.»*

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