

Economic and Financial Newsletter

Quo Vadis?

He who controls Taiwan, controls the world

1. What's going on in the world

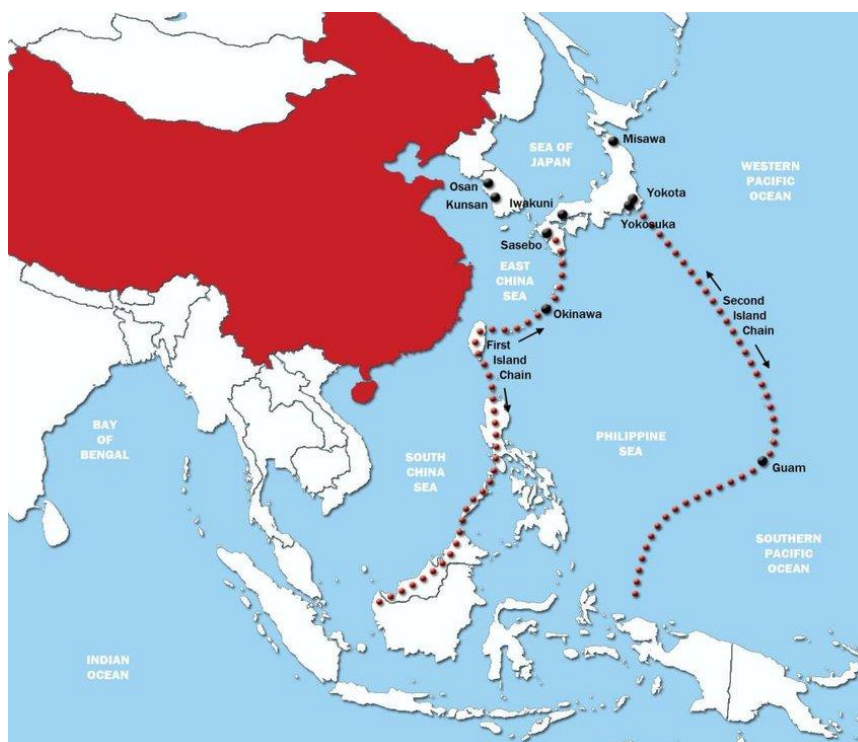
Strait-through processing

In times of war and rising international tension, Nancy Pelosi, America's de facto number three, thought of nothing better than to make a blitz visit to Taiwan to "show her support for this dynamic democracy". By continuing to nurture its friendship with America and by facilitating futile provocations, Taiwan is upsetting the fragile balance of power in the region. China has responded only by a military show of strength, but it brings China's annexation of Taiwan another step closer and much closer than many observers seem to think.

America has China and most of Southeast Asia in its stranglehold through what is called the First and Second Island Chain (Figure 1). The First Island Chain comprises the Southern Japanese archipelago, Taiwan, the Philippines and Borneo. The Second Island Chain lies between the eastern Japanese archipelago and Papua New Guinea, with Guam right in the middle.

America has military bases in, and alliances with, the countries on the First and Second Chains. It has stationed its Seventh Fleet - the largest American forward-deployed fleet with its 27,000 troops and some 60 ships - in Yokosuka, Japan, from where it covers the western Pacific, including the South China Sea and the eastern Indian Ocean. America has learned lessons from Japan's attack on Pearl Harbour and wants to shield its own west coast from Chinese invasion. And with its military presence, it can shut down China's maritime supply and export lines in the blink of an eye, literally shutting down the Chinese economy. China, like Japan, imports 80% of its oil needs via maritime transport from the Persian Gulf, where it passes through the Strait of Hormuz between Iran and the Emirates. The US Fifth Fleet is based in Bahrain, in the Persian Gulf. Closer to China, the oil transport must pass through the very

Figure 1. First and Second Island Chain



Source : Catama, M. (2015, August 03). China aiming for air control over Western Pacific, surveillance as far as Izu chain.

narrow Strait of Malacca between Malaysia and Sumatra (Figure 2), which connects to the First Island Chain. The shipping lane continues through the Taiwan Strait between mainland China and Taiwan, where nearly half of the world's container fleet passes every year. If China takes Taiwan, it will gain more control over critical maritime supply routes and cut the First Island Chain in two. The strategic importance of Taiwan, once praised by General Douglas MacArthur as America's "unsinkable aircraft carrier", to China is huge.

The most important company in the world

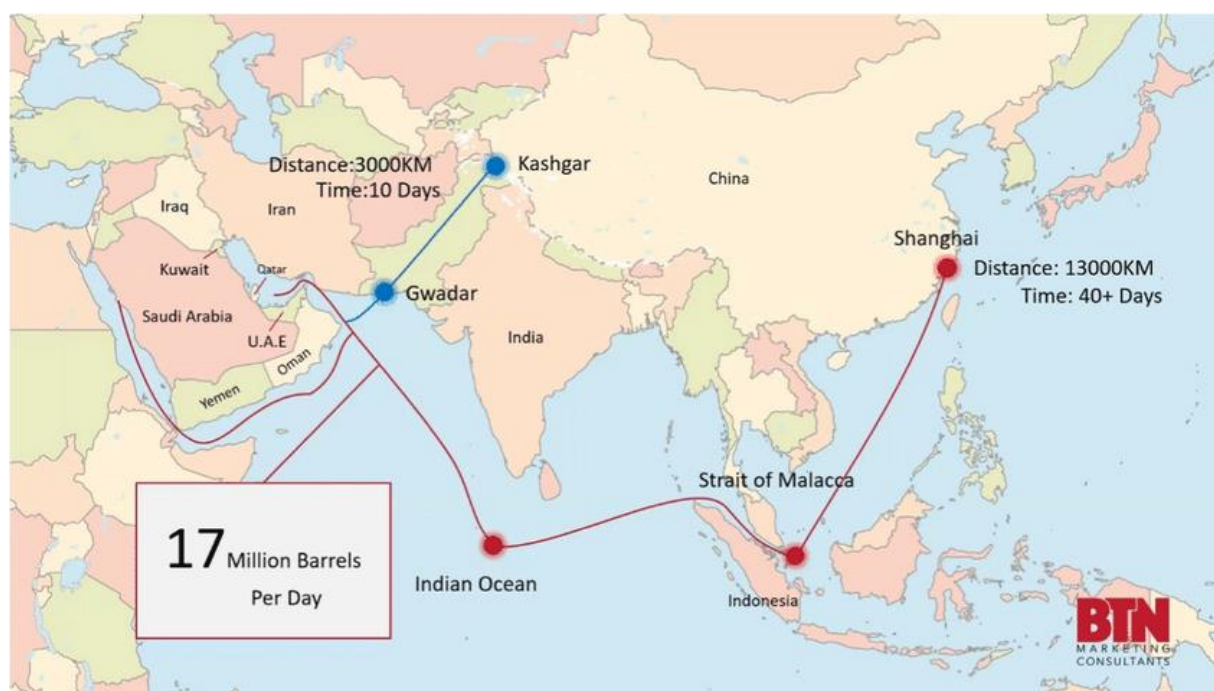
Equally critical is Taiwan's dominance in the production of semiconductors, also known as computer chips or microprocessors. Taiwan is home to the Taiwan Semiconductor Manufacturing Company, TSMC for short. More than half of the world's semiconductors are produced by TSMC. When it comes to the most advanced semiconductors, TSMC even has a de facto monopoly with 92% of world production. TSMC only has to put up with Samsung and, to a lesser extent, Intel, which has started falling behind. Microchips are everywhere: in computers of course, but also in cars, smartphones, MRI scanners, industrial robots, microwave ovens, and so on. They are even implanted in your dog or cat, to be able to identify them when they get lost.

It is no exaggeration to say that if chip production is halted, the world economy will be halted too. Advanced microchips are also the heart of the most advanced weapons. They are indeed the 'new oil'. This makes TSMC, especially in times of chip shortages, perhaps the most important company in the world.

Smallius, citius, altius, fortius

TSMC is partly owned by the Taiwanese government. For understandable reasons, the government watches over its technology advantages like a mother hen. The production of advanced microchips is technologically extremely complex. A chip, often no bigger than a fingernail, contains millions or billions of transistors, usually made of silicon. The more transistors you can pack onto a chip, the greater its processing power. The 2014 Apple A8 chipset, which made its debut in the iPhone 6 and iPhone 6 Plus, produced by TSMC, uses 20 nanometre¹ technology with 2 billion transistors. The current A15 Bionic chip in the iPhone 13 line, also produced by TSMC, uses 5 nanometre technology and is equipped with 15 billion transistors. It explains why the performance of smartphones continues to improve so much. The 2 nanometre technology, that TSMC will roll out in a couple of years, can cram up to 50 billion transistors onto a single chip.

Figure 2. The Strait of Malacca



Source : BTN Marketing Consultants

¹ 1 nanometer is one billionth of a meter. In the past, it referred to physical features of a chip. Today, nanometer referred to the generation ("process").

Gordon Moore, one of the two founders of Intel, predicted in 1965 that the number of transistors on a chip would double every 2 years, what was later called Moore's Law (Figure 3). In recent years, unlike Intel, only TSMC and Samsung have been able to keep up with this pace². China has spent hundreds of billions of dollars setting up its own production facilities for advanced microprocessors, but remains generations behind TSMC. China's own chip producers, the Semiconductor Manufacturing International Corporation (SMIC) and Hua Hong Semiconductor Limited, are unable to produce advanced chips. Once again, China finds America in its way. Huawei, which has close ties to the Chinese government, had managed to design an advanced chip, but was forced to outsource its production to TSMC. In May 2020, the US Commerce Department announced that any chip producer using US equipment who wants to do business with Huawei must apply for a license.

TSMC uses some American equipment and was forced to end cooperation with Huawei, forcing China to go back to square one. China can buy advanced chips, but cannot produce them itself. Another problem is that SMIC and Hua Hong themselves use partly American equipment. And America continues to choke China's efforts with passion. This year's American Chips Act provides \$52 billion in subsidies to companies that produce advanced chips on American soil, but applicants are not allowed to increase their production capacity of advanced chips in China for the next 10 years, so many foreign chip producers are considering reducing their investments in China. They, too, cannot do without American technology and equipment for their own production. China has dedicated a 1.4 trillion-dollar budget to become technologically independent, but this will take a long time and the outcome remains very uncertain.

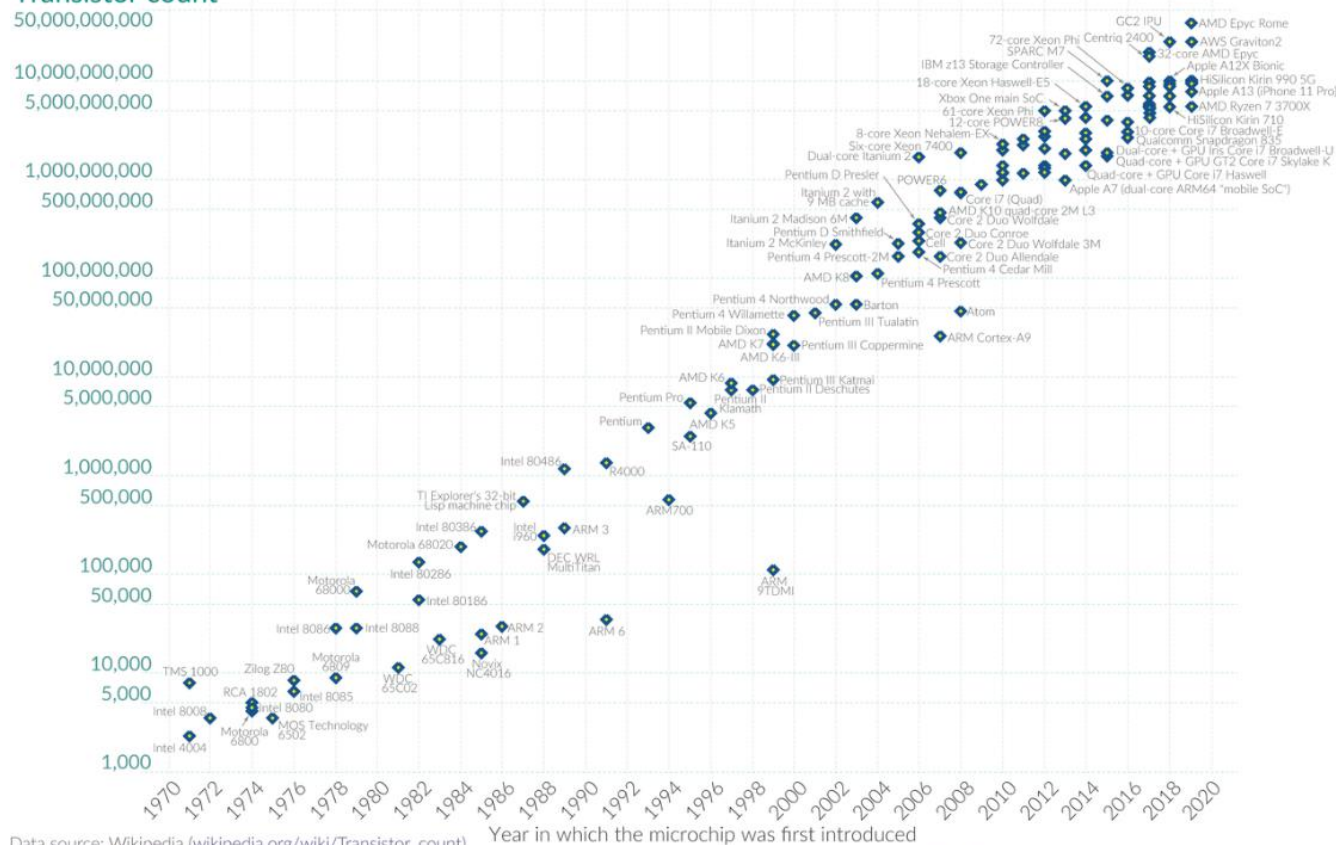
Figure 3. Moore's Law

Moore's Law: The number of transistors on microchips doubles every two years

Moore's law describes the empirical regularity that the number of transistors on integrated circuits doubles approximately every two years. This advancement is important for other aspects of technological progress in computing – such as processing speed or the price of computers.



Transistor count



Data source: Wikipedia (wikipedia.org/wiki/Transistor_count) OurWorldinData.org – Research and data to make progress against the world's largest problems. Licensed under CC-BY by the authors Hannah Ritchie and Max Roser.

² Moore's Law is exponential so its pace will inevitably slow down. We will also reach the physical limits of miniaturization when we reach the level of a single atom (we're pretty close now).

Figure 4. Ranking naval strenght (2021; www.globalfirepower.com)

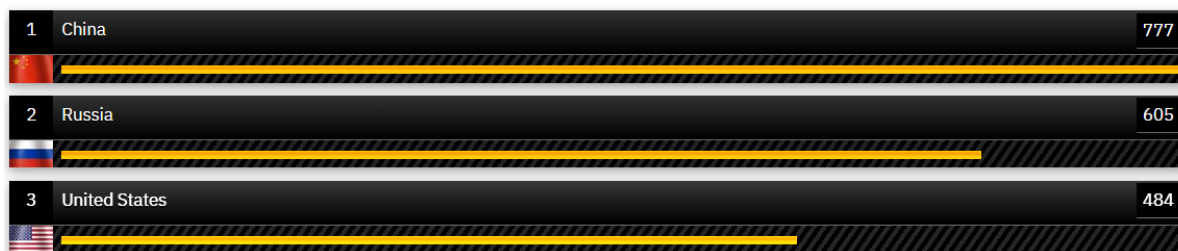


Figure 5. Ranking overall firepower (2021, www.globalfirepower.com)



America, by pushing China into a technological corner, is also pushing China towards the annexation of Taiwan.

Yawn

The financial markets reacted with a yawn to Nancy Pelosi’s visit, but this indicates that they underestimate the risk of a Chinese invasion. Twenty years ago, a yawn was in order because the Chinese navy was no match for the American navy, but today, the situation is completely different. The US spend over 800 billion dollars a year on "defence" and China only 280 billion dollars, but this does not mean the US army is three time stronger. The US is acting as the world's policeman and therefore needs a vast international military presence. America needs a large number of aircraft carriers to have a global reach. It currently has 20. China on the contrary only has 2 (2 more are in the making) but it only wishes to deploy its military power in its immediate vicinity. Beyond aircraft carriers, the American and Chinese navies are increasingly evenly matched (Figure 4). China is rolling out new ships like crazy. It has maintained a vast naval production capacity: China produces 40% of all the ships in the world, the US and Europe combined only 1%. In case of war, China, just like the US during WWI and WWII, can easily outproduce both the US and Europe. From a broader perspective, on the basis of global firepower (without taking into account nuclear weapons), China is now almost on a par with America (Figure 5). China has a lead in cyberwarfare, at the heart

of modern warfare. It also has a lead in hypersonic missiles, that can not only travel at great speed, but also a very low altitude. The latter implies that radars can only pick them up when they are already flying close to target.

Figure 6. The nine-dash-line



Source : The Economist

The Chinese military has taken up very aggressive positions on the atolls in the South China Sea, within the so-called 'nine-dash line' that marks China's territorial claim (Figure 6), while the nearest American military bases in Guam, South Korea and Japan are relatively far

outside the South China Sea. China can deploy its air force from the Chinese mainland and from the atolls, so, unlike America, it does not really need aircraft carriers in the region.

Step on the gas

China has not only built up its navy over the past 20 years, but has also reduced its dependence on its oil supply through the Strait of Malacca. The most obvious solution to stay out of reach of the US Navy is to go overland. For more than 10 years, China has been able to import oil and gas via pipelines with Turkmenistan and Kazakhstan. China is also increasingly turning to 'big friend' Russia, of course, and is only too happy to buy Russian oil and gas, which Putin can no longer dispose of in the West, at a hefty discount to the market price. Since 2019, Gazprom has been pumping Siberian gas directly into the Chinese economy via the 3,968-kilometre Power of Siberia-1 pipeline (Figure 7) in the North. On 4 February 2022, just before Russia's invasion of Ukraine, how coincidental, Russia signed a contract with China to supply additional gas for 30 years via a new pipeline in northeast China, which would be commissioned before 2025. And there are plans for Power of Siberia-2, which would run across Mongolia. If approved, the whole project would be operational around 2027-2028.

Russia exported 16.5 bcm (billion cubic metres) of gas to China in 2021. By 2025, this is set to rise to almost 50 bcm. Numerous other pipelines, including with Iran, are in the works. And one should not forget in all this that it is not oil or gas that is the main source of energy in China, but coal. Coal still covers 60% of China's energy needs, oil and gas only 20%. And China has no shortage of coal. China is also investing massively in renewable energy. So, America is rapidly losing its grip on China's energy supply. Together with the building of its own strong navy, China is paving the way for the capture of Taiwan. The only real obstacle is China's dependence on the SWIFT system (for international bank payment orders) with which it must process its trade. But that too is being worked on by creating its own alternative system to which Russia could also be linked. And it is far from certain that the West would necessarily throw China out of SWIFT because both parties would suffer great damage.

Figure 7. Power of Siberia



Source : CNBC

No moral authority

America's moral authority has been severely eroded by Joe Biden's weak presidency and by the ignominious retreat from Afghanistan that he orchestrated. Tellingly, Biden was recently made to look bad by Saudi Arabia and, by extension, all of OPEC(+), which refused to respond to his plea to increase oil production and thus dampen the high price of oil. Well, that's what happens when you insult people. After the gruesome murder of journalist Kashoggi in the Saudi embassy in Turkey, Biden had earlier boldly declared that he would make Saudi Arabia a pariah. America is also hopelessly divided internally politically and the international community knows it.

President Xi, soon to enter his third five-year term, is not a man to be trifled with. His ambition is most probably to go down in history as the man who, through the annexation of Taiwan, finished the work of Mao's revolution. The Japanese attack in 1941 on Pearl Harbour in Hawaii, where President Roosevelt had stationed the American Pacific Fleet to temper Japanese aggression in South-East Asia, came as a total surprise to America. But was the attack not imminent? After all, America had issued a series of trade embargoes against Japan in retaliation for their opportunistic invasion of French Indochina in 1940,

shortly after France's capitulation. The trade embargoes cut off Japan's supply of raw materials and motivated Japan to take bold action. Replace 'Japan' with 'China' to bring the story up to date and you will no doubt see the analogy.

Take a chance

As things stand today, China actually stands a good chance of winning a short-term war against the US and its regional allies. China is not ready to conquer the world, but is ready to break the First Island Chain. However, an invasion of Taiwan would indeed confront China with the 'Malacca Dilemma'. The US would probably first try to block the Strait of Malacca, before declaring war. The economic impact to China could be devastating. But is America really willing to go to war over Taiwan, as Biden was saying? The economic impact to the US would also be devastating. And the US has never recognised Taiwan as a sovereign nation. So, all in all, China may take its chances.

He who controls Taiwan, controls the world. Taiwan and the Pacific, not Ukraine, will be the epicentre of the shifting balance of power in the 21st century.

Hungry for war

As if the clash of arms in Ukraine and in the Taiwan Strait were not enough, the Israeli-Palestinian conflict is also flaring up again, courtesy of Iran, the stakeholder of the Middle East that finances Islamic Jihad. This is what happens when parties ignore the number one rule of successful negotiation: at least be prepared to make concessions. The umpteenth Israeli-Palestinian conflict is in itself, except for those directly involved, of modest importance, but it contributes to the global shift towards war. Trouble is also stirring up between arch-enemies Turkey and Greece now that Turkey wants to drill for gas again in the Mediterranean Sea, off the coast of Cyprus. The historian Geert Mak describes in his masterly work *In Europe* how the enthusiasm of the European population for war grew on the eve of the First World War. People were ready for it, eager for it. War is a self-nourishing process. The more war is waged, the more war is normalized. The Pax Americana brought a relative peace after WWII, but it is a historical exception. The normal state of the world in history is that of war, not peace. The world is again playing with fire.

2. What's going on in the economy

The disintegration of Europe

Russia's de facto closing of the Nord Stream One pipeline is driving Europe's gas prices into the stratosphere again. European gas prices have reached record heights.

European gas prices are now seven times (!) higher than those in America. This not only puts Europe at a huge competitive disadvantage compared to America. Europe's energy-intensive companies, the chemical sector in particular, have no future at these prices. America will gladly take their place and is making mega profits by exporting LNG to Europe. The structural nature of Europe's energy handicap will keep energy prices high in Europe for a long time to come and also makes European inflation much more persistent than American inflation. The EU, seeing its industrial tissue disintegrate and with riots in the streets of Prague, which soon could boil over, is desperate and is now working on price controls and a crackdown on energy traders and on the current market mechanism. Europe, through its growing interventionism is rapidly moving towards a central plan economy.

The market expects inflation in America to fall back towards 3% over the next two years, reinforced in this idea by the American inflation figure for the month of July, which came out at 8.5% (8.7% expected, 9.1% the month before), slightly lower than expected. Inflation in America is therefore heading in the right direction, but one swallow does not make the spring. In Europe, things are going the other way - and unfortunately the wrong way - and the market expects inflation to remain at 7% for the next two years, triple that of the US (Figure 9; the 'breakeven inflation' shows the implicit inflation expectations that have been factored into the bond market).

Big trouble in Big Italy

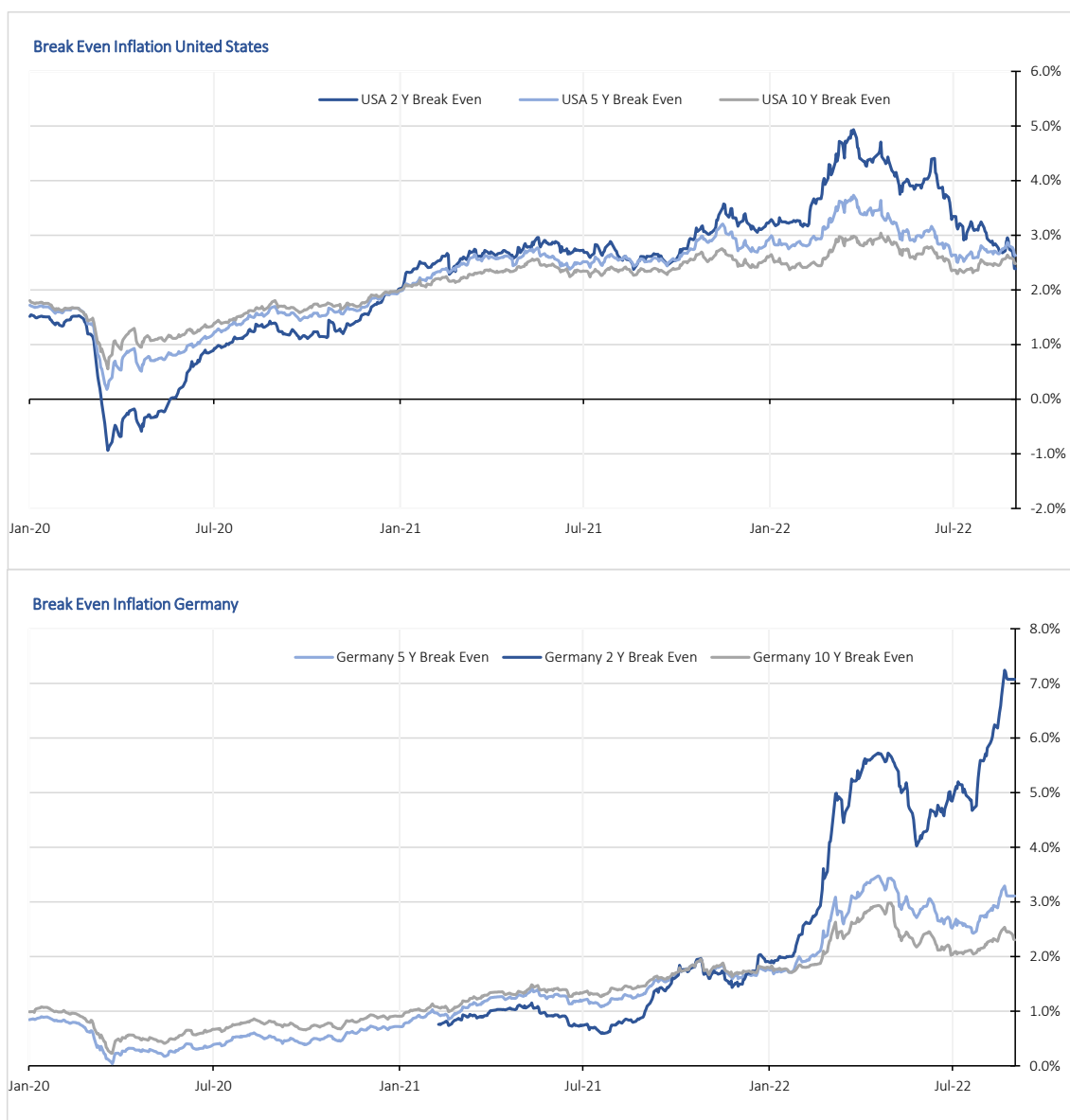
Italy, the sick man of Europe, continues to falter. The Italian national debt amounts to almost EUR 3,000 billion, or 150% of Gross Domestic Product. The debt continues to balloon due to a structural lack of economic growth. Since the introduction of the euro in 1999, Italy's real GDP per capita has remained stable, meaning that the country has made zero economic

progress. Italy needs to radically reform its economy to pull itself out of this quagmire. Super Mario [Draghi] was supposed to succeed in this but, like just about every reform-minded politician in Italian history, was forced to give up - courtesy of Silvio Berlusconi and Matteo Salvini, putting much-needed economic reform at risk. Italy has not only major economic problems but also a problem of political culture. The new general elections on September 25 may bring a populist government to the stage, which does not bode well for the country's stability.

The new "anti-fragmentation" measures announced by the European Central Bank could reduce the widening interest rate gap between Italian and German government bonds,

but credit rating agency Moody's threw a spanner in the works by lowering the rating outlook for Italian government debt from stable to negative on 6 August. Italy's current credit rating is flirting with the lower limit of what is called investment grade. A further downgrade would place Italy's sovereign debt in junk bond status and raise the prospect of a new round of euro crises. Italy is Europe's elephant in the room. The ECB's measures remain stopgap measures that do not fundamentally solve the problem, but may eventually make it worse because they relieve the pressure on Italian politicians and the population. Soft nurses make dirty wounds.

Figure 9. Break even inflation rate US and Germany



Source : Bloomberg

Good heavens!

On 4 August, the Bank of England raised the policy rate by half a percent to 1.75%, joining the long line of central banks that are slamming the monetary brakes. Inflation in the UK is close to 10%. The Governor of the Bank of England, the rather clumsy Andrew Bailey – who exhorted the British people to moderate their wage demands while earning himself 18 times more than the average Briton - at the same time painted a very gloomy economic picture. He expects an economic contraction of more than 2% and a peak of inflation of 13.3% in October. Thirteen per cent! Citibank even predicts inflation of 18%. In Germany, still the most important economy in the Eurozone, the government is introducing a special levy - albeit tempered by a VAT reduction - on the gas consumption of households and businesses. That means losing purchasing power twice: once through inflation and once through higher taxes. It is not only energy prices that have gone through the roof, but also food prices: the United Nations Global Food Price Index has risen by 70% in the past two years. Stagflation, the toxic cocktail of high inflation and a sputtering economic engine, everywhere. The European economy may have performed surprisingly well in the second quarter, but the likelihood of a deep recession is growing by the day. Many business leaders that they have seen a marked deterioration in demand since the end of June.

Cry me a river

Murphy's Law states that misfortune never comes alone. The persistent drought, the worst in 500 years according to the European Union, is leading to exceptionally low water levels in European canals and rivers and is throwing a spanner in the works. Large sections of the Rhine, which accounts for 80% of freight traffic on German waters, were declared unnavigable in August.

This leads to economic chaos. The German railways have no extra capacity and there is a chronic shortage of truck drivers. This jeopardizes the supply of coal-fired power stations, making Germany's huge energy problem even worse.

Blood, toil and expensive gas

Belgian Prime Minister Alexander De Croo went after Winston Churchill by predicting "5 to 10 difficult years", followed by Macron who announced the "end of an era" and later "the end of abundance, carefree and secure times". Brilliant, that is how you create a recession. The European consumer is indeed becoming even more gloomy. The European Central Bank survey recorded that European consumers are anticipating a doubling of unemployment to 12% and permanently high inflation, which will further erode their purchasing power because their incomes will lag behind. Unlike Belgium, not all European countries have automatic wage indexation.

Figure 10. Rhine River, August 2022



Consumer confidence has fallen back to levels comparable to those of the Great Financial Crisis in 2008.

China back to square one

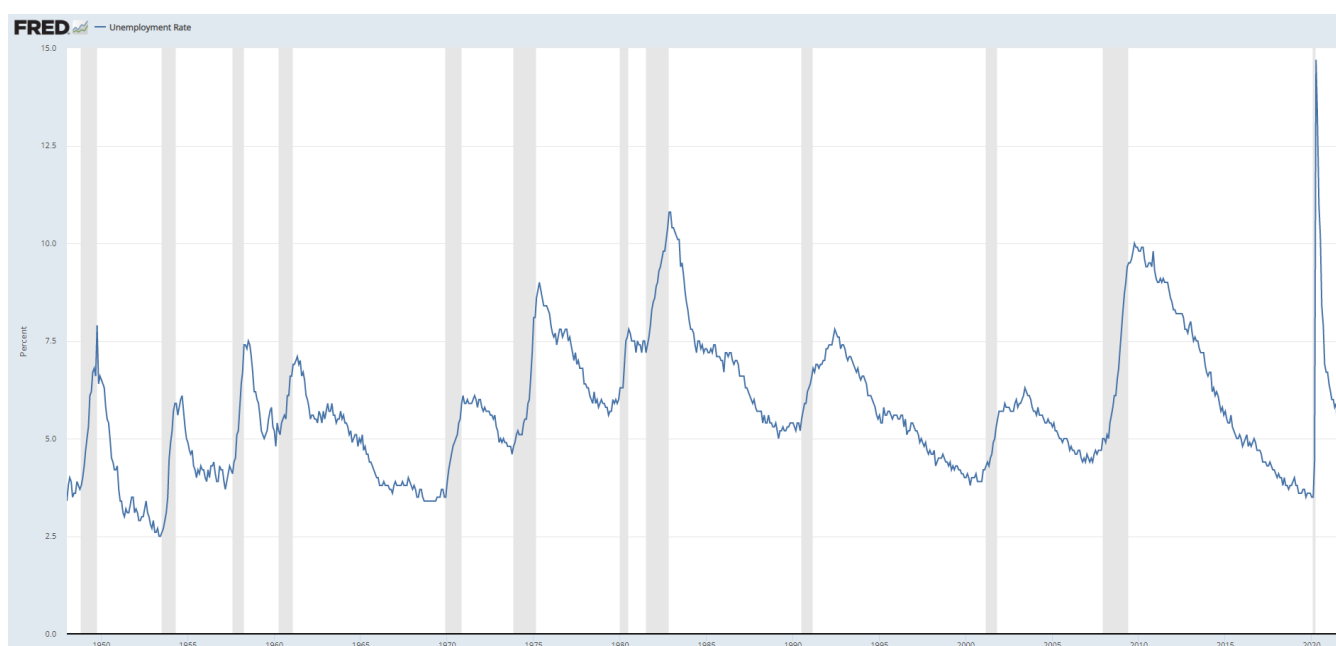
In China too, there is reason for gloom. Ren Zhengfei, the chairman of Huawei, China's largest tech company, decided to follow the Belgian Prime Minister's example and in an internal memo urged his staff to go into "survival mode". Indeed, the Chinese growth model seems to be coming to an end. Growth in the second quarter was a meagre 0.4%. China is struggling with structural problems. It faces a rapidly ageing population, is deeply in debt - much of which is kept out of official statistics - and is excessively dependent on the real estate sector. And the latter is capsizing. In China, new construction projects are – or better, were – often sold years in advance to willing buyers who think that property prices can only go up. Now that the market is going through a sharp correction, many buyers are pulling out. Others refuse to repay their mortgage loans, reinforcing the downward price spiral. China is also unable to shake off the Covid yoke. Chengdu, a city of 20 million people, was put into lockdown. The years when China could achieve growth figures of 7 to 10% are over. In the coming years, growth will slide towards 3%. China is one of the very few countries where the central bank is lowering interest rates instead of raising them.

Just like Turkey, by the way, which has started an unseen monetary experiment: fighting hyperinflation with lower instead of higher interest rates. Total madness? Certainly, but then consider that the old monetary recipes have totally failed over the past 20 years. Just think of Quantitative Easing - the massive buying of bonds by central banks - which, instead of boosting consumer price inflation, has mainly led to asset inflation. Contrarian Turkish monetary policy takes into account Einstein's witticism that "The definition of madness is to keep applying the same method in the hope that the result will change". And who are we to prove Einstein wrong?

America in recession, not

The US economy shrank 0.9% in the spring compared to a year ago. It is the second contraction in a row. This led to a fairly ridiculous semantic discussion about whether we should or may now speak of a recession. If it is a recession, then it is in any case a very peculiar one. The US economy remains in great shape with an unemployment rate of 3.5% (Figure 11) and new strong job creation of no less than 500,000 new jobs in July and another 315,000 in August. The unemployment rate was only lower in the first half of the 1950s, when all hands were on deck for post-war reconstruction, and in 1968, on the eve of a decade of stagflation.

Figure 11. US unemployment rate



Source : FRED economic data (St. Louis Fed.)/U.S. Bureau of Labor Statistics

3. What's going on in the financial markets

Goldilocks

At the end of June, the stock markets were initially drawn to an "it will all turn out fine" scenario, AKA "Goldilocks" scenario, in which the economy goes through a recession, but a mild one, and in which inflation is kept in check without the central banks pulling too much the monetary brake. There are plenty of bad inflation figures, as we mentioned earlier, but there are indeed signs here and there that inflationary pressures are coming off the boil. The problems in the global supply chains are gradually being resolved. BMW, for example, has announced that delivery times are returning to normal. Normally supply follows demand, but now demand follows supply. Faced with delivery terms of more than a year, more and more buyers are pulling out. The chip producers, one of the most important suppliers to the car industry, have also indicated in August that demand is slowing down considerably. Fewer supply problems mean lower prices. The price of wheat has fallen back to its pre-war level. "Doctor Copper", a name copper owes to its reliability as an economic barometer, has fallen by more than a quarter, aluminum even more. And Europe's gas reserves are being replenished at a rapid pace. The mood was that the interest rate rises and the recession would not be too bad.

It is typical of the stock market to sometimes see the glass half full and sometimes the glass half empty. In the first case, all the news is good news and the stock market rises. In the second case, all the news is bad news and it falls. The problem is that you never know in advance whether the stock market will set its sights on half-full or half-empty. That is what makes market timing so difficult. The stock markets were also initially supported by the publication of better-than-expected company results, more so in America than in Europe. The absolute standouts are the oil producers. The five largest Western oil producers posted a net profit of USD 60 billion in the second quarter. Their shareholders - perhaps not fans of SRI like Warren Buffett who keeps increasing his stakes in Occidental Petroleum and Chevron - can only be happy. They are being treated to super-dividends and are also seeing their earnings per share rise as oil companies use the record profits to buy back their own shares *en masse*.

The initial boom misled many leading investors, such as Dr Michael Burry, who became rich and famous thanks to his Big Short on the US housing bubble. But the boom was abruptly ended in the second half of August by game-changer Jerome Powell who signaled that the Federal Reserve would continue to raise interest rates sharply to curb inflation, even at the cost of a recession. The stock markets went back to square one and interest rates went higher again.

Table 1. Key figures as of the end of August 2022 (performance in Euro)

1. Stock Markets	Performance in August 2022	Performance YTD
MSCI World Index	-2.97%	-7.9%
MSCI Emerging Markets Index	1.46%	-8.6%
MSCI China Index	1.55%	-10.5%
S&P 500 INDEX	-2.88%	-6.0%
NASDAQ Composite Index	-3.28%	-14.5%
EURO STOXX 50 Price EUR	-5.15%	-18.2%
2. Interest Rates	Level end of August 2022	Difference with year start
Euribor 3 month	0.65	1.23%
US Fed Funds rate	2.33	2.26%
OLO 10 year	2.18	1.99%
US Treasury 10 year	3.20	1.68%
3. Exchange Rates	Level end of August 2022	Difference with year start
EUR/USD	1.01	-11.6%
EUR/CHF	0.98	-5.3%

*YTD = Year-to-date

Source : Bloomberg

Dark clouds

The stock market has gone too far in its optimism. There is the gun-toting in Eastern Europe, the risk of a hard economic landing in Europe and China, the risk of a new Euro crisis and the headwind of interest rate hikes. The Federal Reserve has proven in the past that they will continue "until things break". Powell is keen to correct his blunder of last year in proclaiming that high inflation was transitory. The market may be underestimating the scale of further interest rate hikes.

After all, short-term interest rates remain ridiculously low in relation to inflation. US short-term rates of 3 or 4% are a joke compared to the 20% rate in 1981, which was used by Fed Chairman Paul Volcker to quell inflation. Corporate profits for the second quarter were better than expected, but the economic slowdown will put pressure on profit margins. And then, of course, there is Taiwan, where we started our review. These are not times to be overconfident as an investor. Better safe than sorry.

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