Economic reflection

Q1 2020

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This paper represents a strong conceptual framework for my understanding of the potential course of event. This is certainly a non-biased opinion as I have no financial incentive for market to going up or down. We are currently facing a situation were upside is limited and downside unlimited, which I should address with a lot of reflections. First, I should address the actual economic context and then diverge into future possible outcomes with a deep analysis of each factor.

Current economic situation:

As many were thinking that a recession was too far from us, I should say that the coronavirus effectively precipitated us in a recession, but we were clearly heading into one. Let me explain: To position us in economic space before covid-19, I would say we were in a late business cycle slowdown as many indicators showed us. Falling capacity utilization, flat output gap, inverting yield curve, falling real interest rate… all signs that we were playing in the end of a decade long bull market drove recently by corporate taxes cuts, share buybacks and passive investing. As for the political environment, many would say that we were in weak environment dominated by Brexit uncertainty, a US-China trade war affecting the manufacturing sector and even a strong competition for the US elections. All were putting additional doubt pressures on the economy.

Then came the start of the coronavirus spread, expending from China to the rest of the world in a matter of weeks, which then created a global health crisis and national lockdowns, limiting economic activity to essential needs and clearly pushing us in a deep recession, or more commonly known as the Great Lockdown. *(I know I am skipping many events, but this reflection is about possible future outcomes and not past episodes…)*

Current market participant view consists of a potential (U) recovery as massive fiscal and monetary interventions were put as fast as the virus appeared. The current sectors leading the small rally is those not affected for the moment or profiting, which consist of healthcare, technology, and consumer staple. As soon as doubts of an insufficient fiscal intervention will emerge and aggregate demand not returning to normal levels for many more months or years, a bearish sentiment could take over the actual market. *(Written in early April 2020)*

From now, I should elaborate more precisely what I mean and display the two potential scenarios which I think market participants view will swing between based on multiple determinants.

- **Scenario 1: (20%)**

Potential economic situation:

The first scenario consists of a short economic recession followed by a slow but steady recovery. This was made possible by limited damage to the economy thanks to fast and effective monetary and fiscal policies, which kept corporations and households afloat with targeted loans and subsidizes. Only some limited bankruptcies with no systemic risk occurred and a very restricted portion of small businesses decided to close.

But the MAJOR FACTOR about this scenario is the fact that a vaccine was found early and social distancing measures were lifted, which directly boost the security sentiment of households and businesses in order to recreate a good economic environments for mass consumption and corporate investments, which are the driving forces of the US economy. Supply chain disruptions were quickly resolved and international trade regained momentum in a matter of months as global and coordinated stimulus restarted economies effectively with low interest rates policies.

Low oil prices contributed to the fast regain of the economy as crude is a major output in a lot of industrial industries. Equities slowly regained momentum as hopes for strong growth in corporate profits dominate the market. The real estate sector regains also lost territory due to lower long-term yields which drives more demand for new mortgages…

But I do not want to develop further as the chances of seeing this scenario happening are estimated to be around 20%, which is too poor for me in order to invest research time. As you understand it, I should focus and put my effort to develop, reflect and explain the most widely statistical favorable scenario, which can become the worst recession since 1929 and eventually base my tactical asset allocation in function of it.

- ## Scenario 2: (80%)

Potential economic situation:

The second scenario consist of a prolonged global economic downturn characterized by a constant fear of spending by consumer and businesses, thus creating a self-reinforcing cycle of deleveraging and massive savings, which then results in a sequence of corporate defaults, bankruptcies, and permanent job losses. International trade disruptions and a potential emerging crisis will eventually lead to a growing need of independency and protectionism, therefore aggravating the actual worldwide financial and political instability.

The fear of a second virus emergence and social distancing measures will have disastrous economic consequences on many sectors, weakening many concentrated economies and exacerbating the actual systemic risk of the financial system. Under such circumstances, we must need to examine each potential factor in more detail and understand the implications of a need for constant fiscal stimulus in order to avoid falling in a deflationary spiral.

1) Weak aggregate demand:

The first major assumption that can lead to this scenario is the fact that aggregate demand will not return to previous level (January 2020) for many consecutive months or even years after the gradual opening of economies. This will be due in part to a lack of confidence in the economy, which is a major key for a consumer driven country like the United States that will seriously suffer from the shortfall of entrepreneurship caused by the perception of a too risky environment. In fact, blind confidence fuels the risk appetite of investors, which are the main ingredients of a bull market.

Thus, to correct a potential deviation from economic equilibrium, current businesses that survived will simply re-hire less people to match the actual demand, which will leave many households without their previous income. In fact, this strong contraction in output will lead corporates and households to be much more conservative in their spending due to an uncertain outlook, consequently delaying investments and consumptions for the future and opening the door for a vicious spiral cycle of lower corporate revenues leading to higher job losses.

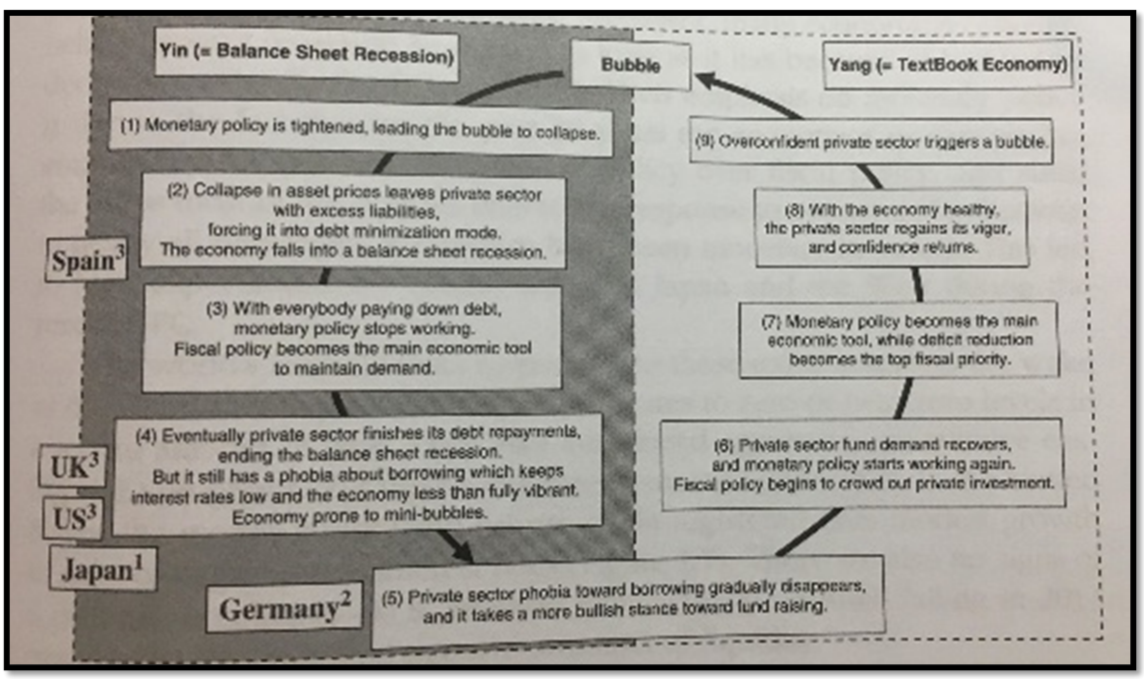
2) New era of deleveraging:

The second major assumption that can lead to this scenario is the gradual installation of a deleveraging trend for both households and businesses. Indeed, the external shock that led to that health crisis obligated many businesses and households to take emergency loans to pay essentials costs and needs while other opted for the depletion of their cash reserves to face the situation. But as soon as earnings will start re-entering, those will be primarily used to repay loans accumulated during the panic and fill the depleted cash reserves.

In fact, because demand will not come back for months, raising the needed cash will be much more difficult as many companies had already large amounts of interest payments initiated during this recent economic boom. Therefore, some compagnies would need to raise capital thru debt offerings, other would need to sell assets at depressed prices while a majority will try to increase net savings by cutting expenditures. For households, this means lowering consumption and for firms, it may mean to fire employees and halt investment in new projects, which would potentially cause a rising unemployment and aggravating the downward spiral. Worse, as more firms are deleveraging, asset decline is getting uglier, which worsens recession by squeezing incoming cash flows.

In short, this can lead to the famous paradox of thrift, which stipulates that an increase in autonomous saving leads to a decrease in aggregate demand, which then lead to a decrease in output and eventually in lower total saving. This situation can clearly be associated with a potential balance sheet recession. This concept was famously introduced by the economist Richard C. Koo to explain the Japanese recession of the 90s. He explains that in this type of recession, insolvent or near insolvent companies will choose to minimize debt instead of maximizing profits, which go against the traditional economic theory. He also states that when companies that ordinarily borrow to expand their operations start paying down their debt, the aggregate demand fall for two factors: firms stop investing their own cash flows and worst, they stop spending the savings of households. In clear words, he says that if asset prices fall below the value of the debt incurred to purchase them, then the equity must be negative, making people simply insolvent.

But unlike the Japanese recession in 1990, we will potentially face two type of recession at the same time. One caused by lower demand for products due to the actual consumer fear but also a balance sheet pressure due to falling asset values. This will eventually lead to the emergence of many structural problems. First, there is the aversion to debt, which cause people to stop borrowing heavily and create slow and modest recoveries. Also, another major problem is the <u>eroding collateral value</u> of households like lower housing and stock prices, which certainly make everybody feel less wealthy and consequently unconfident to spend more. In addition, restoring confidence in the consumer can not do much because no matter how confident they may be feeling, debtors cannot spend more if their creditors insist they cut back. Excessive cuts in spending by households and fiscal stimulus providing income to those who do not need it may certainly lead to an accumulation of unborrowed savings in financial institutions. But those additional incomes were initially distributed to be spent to stimulate the economy, not saved, and invested. In fact, the private sector may not even use those savings as he is himself deleveraging from excessive debts, thus creating a strong misallocation of resources. (*We will come back later on this subject in the section analysing past and potential fiscal and monetary stimulus actions*)



Now some may think that higher saving rates could stimulate domestic economic growth by lowering the local cost of capital, but I think that in a situation where businesses are facing a fragile environment, it would majorly create an insufficient demand for economic output. The only way this scenario can get better is when cash flows will completely erase the accumulated bad debt and recreate firms with strong balance sheets. But like we will see further, fiscal interventions will be the key to cover the deflationary gap and help the economy survive to those type of self-reinforced deleveraging cycles. Usually, consumption and GDP will contract during the first years of deleveraging and then start to recover.

3) Worldwide credit instability and emerging market difficulties:

Globalization and economic inter-dependency created an environment where each country's income is dependant of other countries appetite, which is currently causing a greater risk for the financial system. Indeed, we are facing a situation where EVERY country is facing lower economic activity and credit difficulties at the same time, making the situation completely different from other crisis. Empirically, countries always led each others in their financial difficulties, which eased the shock of a global financial crisis.

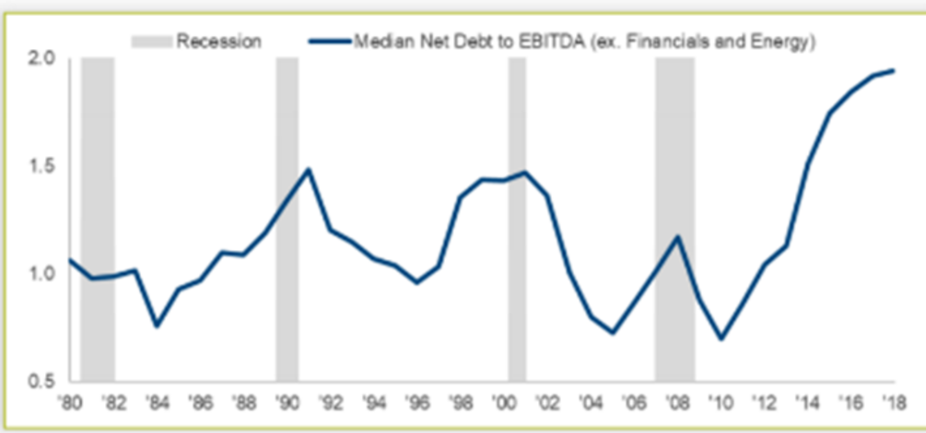
On the other side, studying past epidemics like the multi-wave 1918 flu pandemic can gave us little previews about potential economic damages we may face. For example, the lost of productive workforce, weak consumer sentiment and devastating social distancing policies are all common factors contributing to major cutbacks in global output. Now it is important to take a closer look at credit instability consequences in the main countries that could create possible system risk for the financial system.

I. United States situation

First, in the United States, BBB ratings now represent more than 50% of the highly leveraged corporate debt market. As soon as rating agencies will start downgrading billions of debt on unhealthy balance sheets, downgrades could incite a large volume of selling that could then infiltrate the rest of the market and quite possibly exacerbate the negative price action. One potential factor that can cause this type of scenario is a sharp drop in collaterals value due to distressed selling of firms to quickly raise cash to meet their financial obligations. This could eventually lead to feedback loops of greater fall in the net worth of businesses, which will precipitate bankruptcies and create falls in bank assets, leading then to a surge in bank insolvencies, thus reduction lending to those who need it. This assumption is clearly stated in the debt deflation theory of Irving Fisher, saying negative inflation will lead to a surge in the real value of overall debt levels, creating this dangerous spiral. Other factors leading to this scenario can be the fact that as some states and major companies are unable to get loans due to higher credit spreads, governments step up and decide to lend them capital, assuming the potential risk premium of defaults for those institutions and dangerously playing with the risk of debt crisis. As well, entering an era of low central bank interest rates can keep unhealthy and unproductive firms with insufficient profits to pay interest payments afloat for quite some time. In the IMF's latest global financial stability report, this point is clearly proven with a simulation showing that a recession half as severe as 2009 would result in companies with $19tn of outstanding debt having insufficient profits to service their debts.

US Corporate Debt Market as Percent of GDP[15]

Net Leverage of Russell 3000 Companies
(Ratio of Net Debt to EBITDA)[26]



II. China’s situation

Now in China, because it social situation can be considered as a preview for many, the international community seems re-assured economically about a potential disaster when they see it success at controlling the virus, lifting the lockdowns and allowing people back on the streets. But after China saw it first GDP contraction of 6.8% for the first quarter, thinking the real disaster is over is completely absurd. In fact, China is not seeing anything comparable in consumer spending as a lot of small and medium-sized businesses were forced to close and did not provide any unemployment insurance to their employees, which left millions of Chinese citizens without help. Recently, a survey made on Alipay showed that more than half of Chinese households’ plan to increase savings and cut back on spending following the Covid-19 pandemic.

Proof of that came in the Yum China Holdings earning call, who owns, operates, and franchises restaurants like KFC and Pizza Hut in China. Executives stated: *“…the recovery is not guaranteed nor linear. Volume has not yet returned to pre-outbreak levels…2020 will be a very challenging year…We will continue to implement aggressive measures to control our costs. The outbreak has highlighted the importance of having a prudent financial profit. Traffic at transportation hub and tourist locations has also been extremely soft. The recovery trend is gradual and choppy. Now, we will be taking decisive actions with regard to cost management. Sales leveraging will continue to pressure margins. At the current sales run rate, since the outbreak and excluding one-time relief, we have not reached levels required for sustained profitability…The outbreak highlights the importance of online to offline integration. Our investment in digital, technology and supply chain will continue.”*

Excluding the reform needed in the wealth distribution and the structural form of the system, the government may compensate lower export demand and weaker consumer expenses with higher investment spending as it always did. But creating unstainable project for GDP enhancement seems always riskier as China’s debt is almost 310% of GDP, one of the highest in emerging markets. For example, the creation of the BRI multi-billions investment project (The Belt and Road Initiative) by China’s government, which focus on infrastructure development around Asia and Africa, exasperated the financial risk of China. Indeed, like the Global Debt Monitor

report of the Institute of International finance showed, an impressive majority of loans were made to countries with high and rising debt levels. For example, we can read in their report that over 60% of the 72 core BRI countries that got loans are either non-rated or have a non-investment grade rating on their long-term foreign currency debt. Also, they constated that the abundant liquidity created by loans from China coincided with a sharp rise in general government debt in Djibouti, Tajikistan, Mongolia Uzbekistan, the Maldives, Kenya, and Pakistan.
(Analysis of emerging markets is made further)

III. Global and Emerging debt picture

Global debt starts also to be a strong preoccupation, as the global debt-to-GDP ratio newly hit a 322% in Q3 2019, with total debt reaching almost $253 trillion. Worse, with recently announced unprecedent fiscal interventions, this number is set to explode in the next years. Besides that, global refinancing risk is extremely high with current conditions and over $19 trillion of syndicated loans and bonds maturing this year across emerging and mature markets.

But I think the actual preoccupation is the potential crisis that can emerge in developing countries since their financial situation is actually deteriorating with their debt rising more than twofold between 2010 and 2019 to $72 trillion. With the current break in the supply of credit, the sharp tightening of financial conditions and the slowing capital expenditures, the pressures on the financing of emerging economies is actually disastrous. In fact, as soon as the crisis started, EMs saw an unprecedent number of capital outflows, which putting extreme pressure on their currencies as people were seeking safe heaven in strong economies and unwinding their carry trades seeking high yields. Actually, according to the IIF, equity and bond markets in 21 large emerging economies saw outflows of around $95bn in two and a half months, which represent more than four times the amount that left in after the start of the global financial crisis in September 2008. Even with the rise in value of their exports due to their lower currency, risk remain. Now, let us look at the situation in more detail:

A) Currency risk

The first factor we should analyse is the potential currency depreciation. Despite improvements in the financial management of EMs since the last crises in the 1990s with the adoption of floating exchange rates and better monetary policies, emerging markets firms stay mostly dependant on foreign capital, in contrary to EM sovereigns who successfully turned more to local currency issuance in order to avoid a situation represented by the Original sin theory, which describe the situation when countries are not able to borrow abroad in their domestic currency. But strong capital outflows may weaken domestic currencies, which can be beneficial in the long term but could stimulate inflation in a global weak environment on the short term as imports get more expensive. Central bank will now face a dilemma of raising interest rates to lower inflation in an already weak economy, which could lead to higher deteriorating economic conditions. This problem is currently decreased by central banks controlling the access to foreign credit in time of excess and by the accumulation of foreign exchange reserves to artificially control their currency in hard economic times. In fact, in the actual crisis, the EMs countries who accumulated a lot of FX reserves could alleviate most of the financial stress on their currency created by capital outflows.

But currency pressure put mainly foreign investors in danger, as they have to deal care about returns in dollar terms, unlike local investors, who care about returns only in their own currency. As yields rise due to widening credit spreads, financial conditions tend to tighten, lowering the demand for local currency in the short term. In a way, exchange-rate moves act like leverage, amplifying their gains and losses. This is why a sharp fall in a currency can push investors to sell even more of their assets before the boost to exports turns the economy around and attracts new investment. Indeed, the currency risk is now mainly on lenders and not borrowers, as large investment funds rely on returns in their home currency like the dollar. And as emerging-market bonds fall in value, the effect is amplified by the associated currency depreciation, which could create self-reinforced loop of asset selling between the currency depreciation and the bonds value.

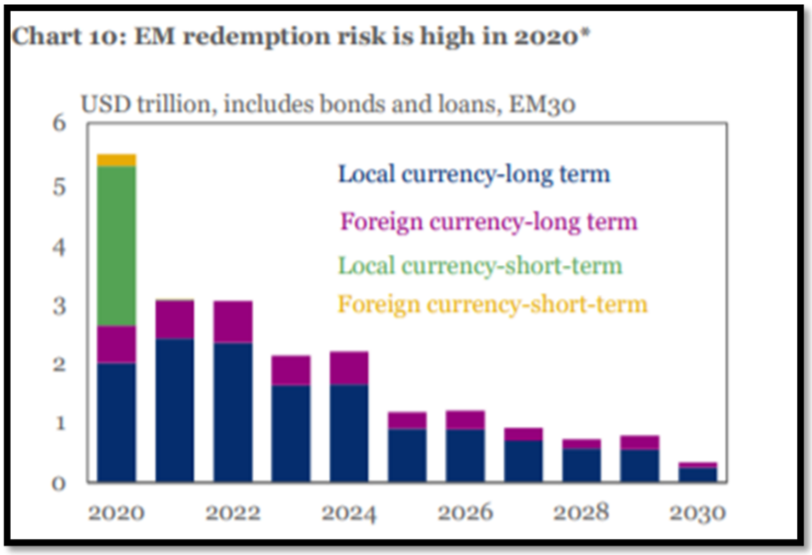


Chart 10: EM redemption risk is high in 2020*

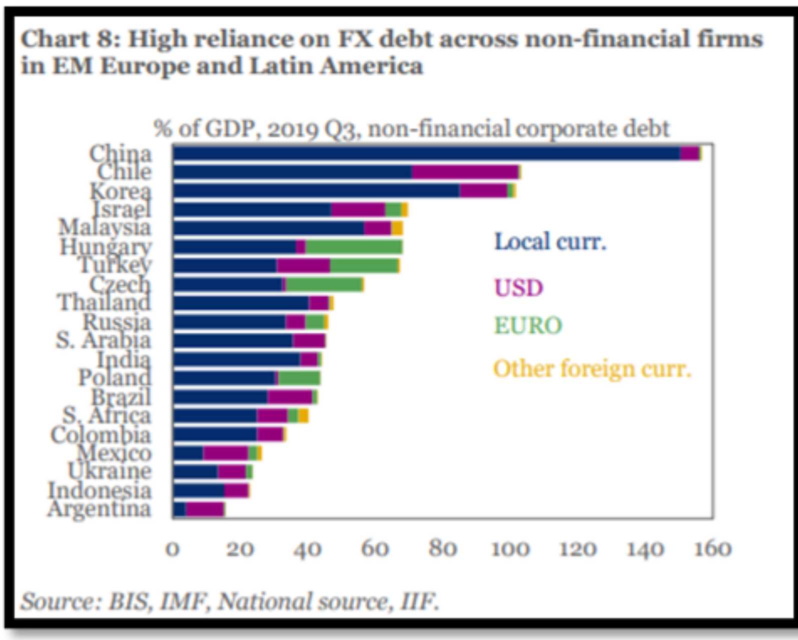


Chart 8: High reliance on FX debt across non-financial firms in EM Europe and Latin America

Source: BIS, IMF, National source, IIF.

This manifest the importance for emerging-market governments to have a large domestic investor base like sovereign funds and individual investors that seek return in their own domestic currency, limiting the effect of exchange-rate swings on their debt repayments. But as central banks will need to step up their monetary policies and act as buyer of last resort by expanding their balance sheet (ex: launching bond purchase programs), this could potentially intensify the currency depreciation of local currencies, thus intensifying the rise in value of foreign denominated debt and limiting the potential fiscal stimulus that each government can put in place.

B) Lower income and future borrowing capacities

The second factor that threatens prosperity of EMs is the fact that they are mostly export driven. Indeed, due to slowing international trade, lower consumption and a complete stop in tourism sectors, foreign demand for products and commodities plummeted to levels never seen in decades, creating a strong revenue crunch for government. Also, reports from the IMF found that global remittances are projected to decline around 20%, which represent a major cut back to a vital source of income for developing countries. And unlike occidental countries, EMs have limited online economic activity to compensate for the lockdown effects, inadequate health-care systems, and limited social-safety nets, which forces some countries in strong indebtment.

This over-indebtment create another emerging problem for EMs, which is the deterioration of their future capacity to borrow as their debt ratio are exploding, loans are getting riskier and their credit rating may be affected, which could lead to scenarios of debt repudiation. Indeed, due to their collapsing revenues and massive capital outflows that weaken their currency, those countries are currently facing difficulties of servicing their debt, which they can only solve with higher borrowing, which cost is getting higher due to rising risk premium.

C) The need for international help and cooperation

Now, many measures like flexible credit arrangement needs to be taken in order to assist developing countries in their recovery as their fall could represent a global systemic risk. One of the major action that was recently taken is the fact that G20 countries agreed on a coordinated action of debt service suspension of official bilateral credit on May 1st. As for organizations like the World Bank and the IMF, they must use their resources to constantly work toward projects of assisting poor countries in their difficulties and reverse the huge capital outflows by making investments more attractive. Of course, the suspension of donations to the World Health Organisation from President Trump is not a step in the right direction at the moment.

Actually, one of the major problem is China's opinion on forgiveness. In fact, Beijing is widely seen as the largest creditor to Africa, with approximatively 20 percent of all African government debt, which put it as a major factor the debt relief campaign for Africa. And even if it signed the G20 agreement, China's process of identifying which loans in which countries could be eligible is widely unknow. But China stated that it may consider extending loans and giving interest relief, but they clearly warned against expectations that China would forgive debts outright, as a vast majority of the BRI project countries are looking to renegotiate loan terms. But it seems that Chinese authorities are clearly determined to recoup the principals and some moderate interests on their loans at the expense of the poorest countries' situation. This could be a response to the Chinese doubt that forgiving loans could improve African governments' debt ratio, thus letting them borrow more debts from international debtors and less from them. In short, I believe that China will make what is necessary to keep borrowers afloat, as a potential default would prevent them from getting their principal.

4) Protectionism movements and potential food shortage

The fourth assumption that can lead to this scenario is the emergence of a self-reinforcing process of protectionist measures to support local prices. Indeed, the emergence of a trend stating to buy and consume homemade to support local producers could lead to global lower demand for commercial trades. Recently, as countries started limiting exports and keeping supplies for them, importers were getting nervous on potential shortage and could from now on decide to take measures to increase their independency in many vital sectors like food and healthcare. The problem is that this will certainly go against the competitive advantage concept, which is currently at the base of our system of international trade and could have disastrous economic impacts on all trading partners but certainly more on export-driven countries. In fact, the Smoot–Hawley Tariff Act of 1929, which implemented protectionist trade policies in the United States, was actually a major cause of the deep economic crisis of the Great Recession and her slow economic rebound. If it were to happen again in 2020, this could seriously perturb the global economy and affect the health of the financial system.

Another supposition that could complicate this scenario is a global food shortage caused by major disruptions in the supply chains of the agricultural industry. In fact, slowing restaurant activities caused by the lockdowns drastically affected the internal supply chains that gets the food from the producers to the buyers. Actually, farmers are currently forced to dump milk, euthanize animals, and throw away their crops due to weeks of economic shutdowns that created changes in consumer’s eating habits. For understanding purpose, here is an example of one of the many current disruptions: in order to adjust to the complex situation, the dairy supply chain would need to convert all the packaging and labelling process of the 40 pounds yogurt format who were destinated to the commercial food services into a smaller retail size package of only 1 pound.

Indeed, because producers are now throwing their hard-worked harvests, they may over correct the situation and seriously reduce the supply of hogs, milk, vegetables, and beef in order to never face again the current trauma they are living. In other words, a shortage may be mainly created due to the existence of delays for supplier to adjust to a fast-changing demand. Added to the many closing plants and the reduction in the help of foreign workers, this health crisis could easily lead to massive food shortages when demand and supply chains will adjust them-selves. Worse, this problem is currently happening all around the world, even in countries like Nigeria, where food truck drivers are disrupting the logistic chain as they are afraid for their own safety, thus letting millions of people in the region at risk of not getting the food they need. And while domestic production goes to waste, the availability for imports is limited as major suppliers like India and Russia are halting shipments to many importers to protect themself in the next weeks from a probable food crisis.

Now if global trade continually shrinks and supply disruptions persist, a prolonged lockdown could certainly affect food security in many countries by completely draining their food stocks and limiting their capacity to import. The world needs to act before situations like the 1974’s disruptions in the Russian production led to the purchase of the entire USA grain reserves, creating a major shortage in the supply of agricultural products. *(In order to monitor the situation, one indicator to watch could be the stock to use ratio, which empirically peaked before past shortages)*

5) Monetary stimulus:

I. Monetary policy timeline

In order to limit the potential damage of the actual crisis, the Federal Reserve had to implement fast monetary policies with focus on three main goals: provide adequate liquidity to market participants, support the credit system, and finance the government spending's.

The first tool used was to cut short-term interest rates to near 0%. Despite the fact that it does impact borrowing costs for some consumers and businesses, does that improved the actual outlook? Just to give you an idea, empirically, a 5% cut on the fed funds rates were necessary to initiate a recovery. Now the second tool used was the coordinated expansion of the monetary base (currency in circulation + banks reserves), the monetary supply (currency in circulation + demand deposits) and most importantly, the credit to private corporations in order to successfully limit the impact of the crisis. The expansion of the monetary supply without growth in private sector borrowing can be justified by debt monetization, which consist mainly of the Federal Reserve buying long term treasuries, thus pushing yields to new lows in order to keep the public debt servicing costs small. *(More detail further)*

This present mainly the risk of a liquidity preference for market participants, as interest rates on bonds are approaching near 0%, potentially creating a scenario of liquidity trap where the expansion of the monetary base may fail to produce any significant effect on inflation. This theory was initially stated by famous economist John Maynard Keynes in his 1936 General Theory. In fact, if deflation pose a real risk to the economy, reflationary monetary policies may be taken to stimulate aggregate demand. Like once suggested by Ben Bernanke as a potential alternative in 2002, one of those measure may be the Helicopter money *(**actually happened with crisis checks and benefits)*, a term made famous by Milton Friedman in 1969 which actually presume that central banks could finance direct payments to individuals or the private sector.

Like we will see further, many central bank policies were used to face the situation, but the importance of keeping a balance between over-stimulation and under-stimulation will be the key to future economic stability. Now, here is a short resume of the major responses conducted by the federal reserve to improve credit conditions and support bank lending before we pass to a small analysis of those measures:

March 15:

- Fed Funds Rate Cut to Zero.
- Quantitative easing (QE) program with $80 billion buy but would extend to at least $700 billion in assets over the coming months with no limit.
- Incitation to use the Discount window by the bank seeking short-term liquidity by lowering the primary credit rate 150 basis.
- Created flexibility for Bank Capital Requirements via buffers.

March 17:

- Commercial Paper Funding Facility (CPFF) for business funding.
- Primary Dealer Credit Facility (PDCF), offering collateralized loans to large broker-dealers to encourage participation in the market.

March 18:

- Money Market Mutual Fund Liquidity Facility (MMLF), offering loans to large banks who buy assets from money market mutual funds.

March 20:

- MMLF expanded the list of acceptable collateral required for a loan to include high-quality municipal debt.

March 23:

- Expansion of QE to include purchases of commercial MBS.
- Primary Market Corporate Credit Facility (PMCCF), where the Fed buy new-issue investment-grade bonds with maturities up to four years.
- Secondary Market Corporate Credit Facility (SMCCF), where the Fed buy secondary-market investment-grade corporate bonds (maturities up to five years) and ETFs of investment-grade corporate bonds.
- Term Asset-Backed Securities Loan Facility (TALF) liquidity corp. bonds) These three programs will support up to $300 billion in financing for firms.
- Expands the CPFF and PDCF.
- MMLF cover wider range of securities (VRDNs and bank CD)
- Modification of TLAC rules

March 24:

- Easing of overdraft restrictions on depository institutions for foreign banking organizations (FBO).
- Limiting of non-critical oversight of the financial institutions.

March 26:

- No actions against firms with less than $5 billion in total assets that submit financial statements after filing deadlines. (30 day's grace)
- The New York Federal Reserve purchase commercial MBS for the first time.

March 30:

- Fed + Regulators ease Impact of rulemakings on Banks (SA-CCR) (CECL)
- Fed Loosens Bank Capital Requirement. (SLR) (Effective April 1)

April 6:

- Coronavirus Aid, Relief, and Economic Security (CARES) Act announce
- Paycheck Protection Program Liquidity Facility (PPPFL), that will purchase Payment Protection Program (PPP) loans from lenders, freeing those banks to continue lending under the PPP, and most crucially, removing these non-performing loans from the balance sheets of private industry.
- The Main Street Business Lending Program, that will purchase $600 billion of debt from companies employing up to 10,000 workers or with revenues of less than $2.5 billion, with required payments on loans deferred a year.
- The Municipal Liquidity Facility, that will purchase $500 billion of debt from states and cities with populations over 1 million.
- Expansion of PMCCF, CMCCF, and TALF

April 23:

- Increases availability of Intraday Credit by suspending limits and waiving overdraft fees for program participants.
- Expand access to (PPPLF) to additional lenders.

April 27:

- Expansion of access to Municipal Lending Facility for counties with a population of at least 500,000 and cities with a population of at least

250,000. (210 participants vs 30 previously) (+ loan note up to 36 months)

April 30:

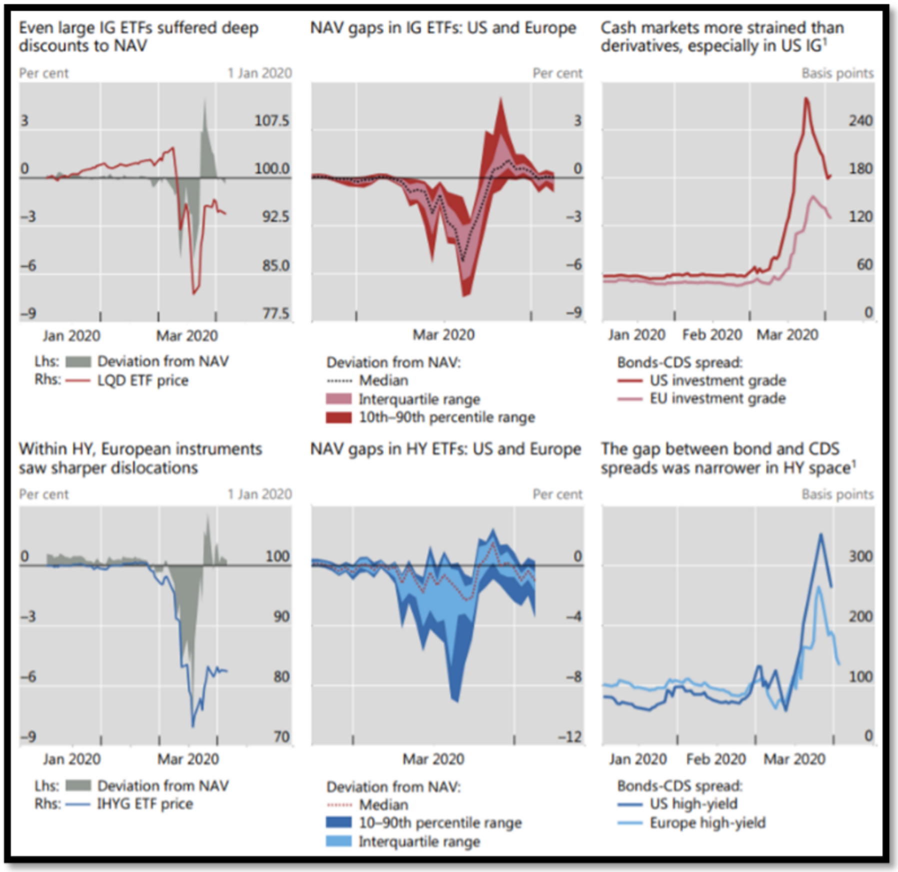
- Expansion of Main Street Lending Program limitations to 15,000 employees and $5 billion in revenue + lowering minimum loan size from $1 million to $500,000. Banks will now retain a higher percentage of some loans, from 5 to 15 % depending on loan type, with Fed purchasing the remainder.

May 4:

- PMCCF and CMCCF Programs stated to start in early May
- Capital requirements (LCR) eased for banks participating to facilities.
- Funding obtained via MMLF or PPPLF will not count negatively for a bank's requirements, encouraging participation in those programs.

A) Illiquidity and forced selling

Like we saw, number of measures (NAME THEM) were taken to provide adequate liquidity to the markets. Those were very important because the strong flight to cash and safety by investors led to an over-supply of sellers for corporate bonds (Investment Grade and High Yield), creating strong deviation between theirs NAVs and their prices, thus reflecting a certain lack of liquidity due to limited support by the dealers who were seeking to preserve their balance sheet and avoid credit risk. Outflows were strong until re-assuring policies were initiated in credit assets by authorities to re-boost investors confidence. This clearly showed that ETFs incorporate information more efficiently about the underlying bonds than the NAV's do. Other anomalies like an unseen volatility on government bond prices was observed with variations of +20% and -20% in matter of weeks. This could be explained by many factors, including foreign treasury selling to seek USD access, the convexity of bond prices, banks seeking liquidity and even self-reinforced cycles of involuntary selling due to an accumulation of losses on leveraged positions by market participants. The unprecedent Fed's intervention successfully reduced the squeeze.



B) Keeping bank credit effective with buffer's alleviation

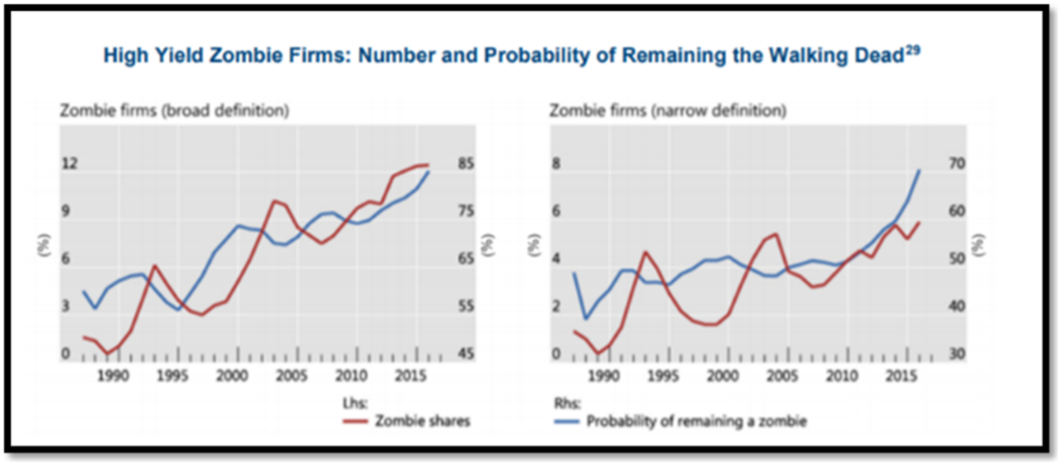
During the Basel III accord in 2009, strict restrictions were put on the banking sector in order to improve their capacity to face financial stress and global systemic risk. But as we are facing an unprecedent crisis, authorities around the world will certainly need to add to their toolkit the relaxation of those regulatory buffers in order to alleviate the current financial stress. Buffers are mainly constituted of two groups: The first category are the liquidity buffers, which help to meet possible cash flows needs without strongly affecting the daily operations of the organization. The second category is the capital buffers (CCob, SIB, CCyB), which can provide additional capital to absorb possible losses in times of economic stress.

Now, the relief of buffers will help certainly support the credit to the real economy by allowing banks to continue operating normally, absorbing their current and future losses, and most importantly give them more flexibility to expand their balance sheets, even during the recovery phase of the crisis. But we may need the presence of another TARP intervention (2008) that will purchase toxic assets from financial institutions in order to strengthen the banking sector with better LCR and really give them the confidence to lend freely to those in need.

C) Risk of credit over-supply

Like we saw, the current major problem that authorities had to resolve were the access to credit/cash for any organization or household that was unable to pay his costs due his lower income. Actions took by the federal reserve responded well to the needs, but like I stated earlier, bridging loans made accessible to firms will certainly increase the national corporate leverage, which raise many questions: Was it the best solution for firms that will see their business activities affected for years? (Sectors: transportation, energy, tourism, commercial real estate…) Was it the best solution for firms that were already in bad economic health before the crisis and were almost unable to service their debt? The answer may be yes because authorities need to act in function of all possible scenarios and not the obvious one, because if a vaccine was found immediately and global social distancing measures were lifted in few months, companies that failed during the small pandemic could have survived and continue to prosper again. Now correct me if I am wrong, but Hayek did not win the fight, free markets are not free, and the deficit is exploding, right? But this may be the cost to assume in order to achieve economic stability and faster recoveries, which I stand for.

But what is the risk to higher corporate leverage? Simple: higher long-term costs (higher debt service) that may be never met by the diminishing income that companies will face due to lower consumer spending, creating downgrades, defaults, and bankruptcies (mostly in sectors previously stated). In fact, providing loans may only retard the failure of bad companies, maybe until Trump get re-elected, but supporting bank lending for firms was the best measure to support the velocity of money in the short term. However, the longer-term thesis may reserve us a completely different story. Indeed, in order to meet financial obligations, global asset selling will increase, thus affecting even more the creditworthiness of borrowers by lowering their collateral values, which add to their lower income streams.



E) Deficit financing by monetary expansion

The fact that the USA has the luxury of printing the currency of denomination of its own debt is a huge advantage, as it can lower the reliance on a financial account surplus in order to finance the growth of their deficit. In fact, expanding the amount of money in the system through quantitative easing (QE) will be a key to lower the debt servicing costs of the government and finance its multiples expenses. But as you know, everything comes with a price: As soon as expectations of slowing purchases emerge, long-term interest rates will start to surge to very high levels, negatively affecting the economy.

Because the central bank would fear a slowdown, their ability to move short term interest rates vanishes. Thus, creating an exposition to hyperinflation risks during the post-recovery era as the excess liquidity supplied to the markets during the crisis would still be abundant. This situation may be called the QE trap or the Taper Tantrum by economists. In fact, in 2013, the Federal Reserve announced the possibility of future tapering (reducing reliance on QE), which made surge U.S. Treasury yields. But like we will see below, the liquidity injected through QE need to be used in the real economy with productive spending, not saved and kept in banks like 2009.

In short, in order to successfully recover from this crisis, it is evident that enough stimulation will be needed through the expansion of the fed's balance sheet and possibly some currency devaluation in order to balance the deflationary forces, but certainly not too much that could plunge the country in a new debt bubble as inflation tends to operate with a lag and can be hard to correct once it starts. Policymakers need to remember that if the private sector stops borrowing even at 0 interest rates in order to pay down additional debt, the additional liquidity provided to banks will certainly go nowhere, thus the need to limit it until the emergence of private borrowers.

6) Fiscal policy

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a) Immediate fiscal impulse ($1,940 billion):

$600 billion (Bruegel estimate) in direct payments of $1,200 to Americans earning up to $75,000 — which would gradually phase out for higher earners and end for those with incomes more than $99,000 — and an additional $500 per child
+ $349 billion in Federally guaranteed loans to small businesses (Paycheck Protection Program). The loans carry interest rates of just 1 per cent and can be forgiven if companies do not fire workers.
+ $320 billion in additional funds for the Paycheck Protection Program. The loans carry interest rates of just 1 per cent and can be forgiven if companies do not fire workers. We assume that most if not all of these loans will be actually forgiven and thereby included them among immediate fiscal responses and not in other liquidity provisions.
+ $193 billion (Bruegel estimate) to expand jobless aid, providing an additional 13 weeks and a four-month $600-per-week enhancement of benefits, extending them for the first time to freelancers and gig workers
+ $117 billion for hospitals and veterans' health care
+ $100 billion to fund national emergency declaration measures, including provisions for emergency paid leave for workers at big businesses, expanded unemployment insurance and free testing
+ $100 billion in additional healthcare spending: $75bn for hospitals and $25bn for additional coronavirus testing.
+ $50 billion in tax credit for retaining employees, worth up to 50% of wages paid during the crisis, for businesses forced to suspend operations or that have seen gross receipts fall by 50% from the previous year
+ $35 billion to increase the Federal share of Medicaid payments by 6.2 percent
+ $32 billion in grants for wages and benefits to the airline industry
+ $16 billion for strategic national stockpile of pharmaceutical and medical supplies
+ $15.5 billion in additional funding for the Supplemental Nutrition Assistance Program (food stamps) and Child Nutrition Program.
+ $8.3 billion to authorities already fighting to contain the outbreak and allocated $3 billion for vaccine research.
+ $1.2 billion to Fund National Guard's coronavirus response
+ $1 billion to fund additional Defense Purchases Act purchases
+ $0.8 billion to fund the emergency food assistance programmes
+ $0.8 billion in Increased funding for Peace Corps, diplomatic programs, USAID and refugees
+ $0.3 billion in additional funds for the State Department, as well as money specifically for evacuation expenses
+ $0.1 billion to support National Endowment for the Art and the John F. Kennedy Center for the Performing Arts in Washington, DC.

b) Deferrals ($561 billion):

$492 billion (Bruegel estimate) delay payroll tax for employers: qualifying companies would be able delay their share of Social Security payroll taxes to the Internal Revenue Service (IRS). They would be delayed until 1 January 2021. (assumptions for estimate: 75% of businesses deferral claim) + $69 billion (Bruegel estimate) student loan payment suspensions without penalty through September 30

c) Other liquidity and guarantee measures ($560 billion):

$500 billion government lending program for distressed companies, allowing the administration to take equity stakes in airlines that received help compensate taxpayers. + $60 billion for the Economic Injury Disaster Loan program. Note that a portion of the $60 billion will be allocated through grants of up to $10,000 per applicant.

Following the ideas of Smith and Keynes, the apparition of the Modern Monetary Theory (MMT) recently led the decade with the idea that the government should use fiscal policy to achieve full employment act as an employer of last resort. And as the government is seeing its income sources shrink, his reliance on the emission of debt is his only way to finance additional spending needs that are largely over the actual income perceived.

In fact, higher government spending will the key to cover the deflationary gap and offset declined perceived revenue due to the lower corporate and households spending in order to pay down their debts. In other words, sustaining the deficit is the good thing to do when faced with a balance sheet recession for supporting the lower aggregate demand created by the current deleveraging. But stimulus packages will not resolve the balance sheets but only have a temporary effect until the real problems is solved.

As the focus was to cover the deflationary gap (the missed spending and investments), subsidies were great, but I do not think that providing checks and more unemployment aid was the best solution. In fact, it could reduce corporate recovery as citizens are less tempted to get back to work and the cash distributed will not entirely be used for consumption due to the uncertainty of getting a job back. This will simply <u>amplify the accumulation of unborrowed savings in financial institutions and cause a misallocation of capital (ex: higher stock prices for no reason)</u>, pushing yields even lower as they will be few attractive places to yield capital other than government bonds. A potential good idea was to distribute consumption coupons for necessary expenses expiring in months, ensuring that the capital distributed will be spent to let corporations clean their balance sheets as fast as possible and then cut the fiscal stimulus in order to avoid potential inflation. For instance, other ideas of real investments could be public construction works (highways, buildings…) or renewable energy investments that could benefit economic growth and national productivity.

Recapitulation of serious economic threat for 2020

1) Lower consumer spending (deleveraging)
2) Lower corporate investments (deleveraging)
3) End in fiscal assistance for beneficiaries + insufficient productive spending
4) Election uncertainty (Future higher taxes)
5) Trust in the system (Riots, lockdowns…)
6) China tensions
7) Corporate bankruptcies (debt overhang) (prolonged fall in revenues)
8) Second and third virus wave
9) Tech valuation (expectations Q2 FANG and the Nifty Fifty)
10) Unproductive loans
11) Global accentuation of the crisis (lower foreign demand) (tourism)
12) Emerging countries debt crisis (debt forbiddance insufficient)
13) High imbalances between large trade deficits and large trade surplus can lead to unsustainable debt accumulation of the ladder and could lead to serious sovereign balance sheet deleveraging.
14) Decline in collateral's value
15) Permanent loss of economic activity

I did not include any mathematic model due to the constantly changing situation and their limit to take account non-linear effects on the economy.

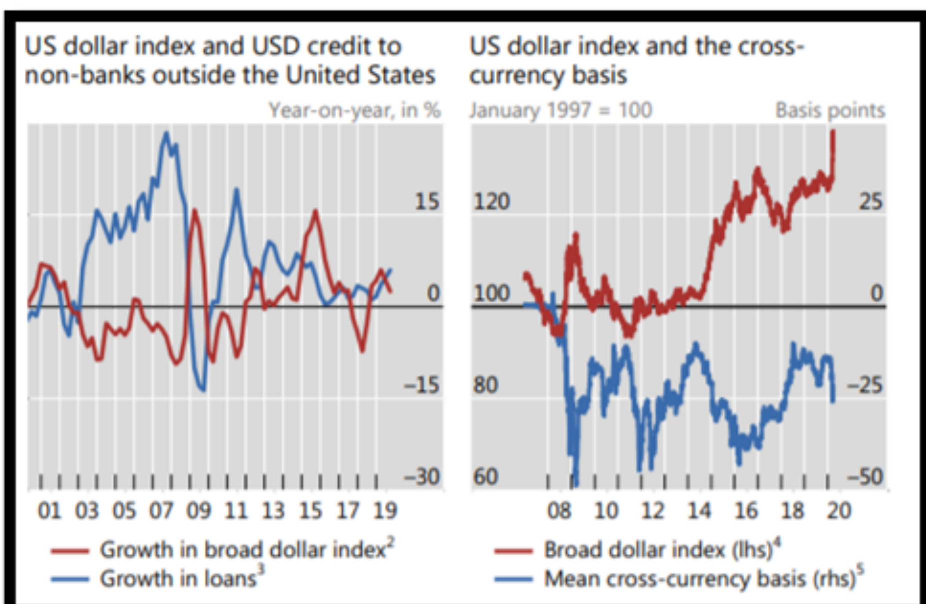
Remember, the only way economic recovery will be granted is through a successful deleveraging of balance sheets, favorable consumer sentiment and private corporate investments. Additionally, a weaker dollar could help stimulate exports. But all this will need time, optimal fiscal stimulation, and a strict containment of the coronavirus (vaccine could speed up the process).

Section 2: Guide for tactical asset allocation

1) Currencies and global capital flows

I. Dollar US outlook

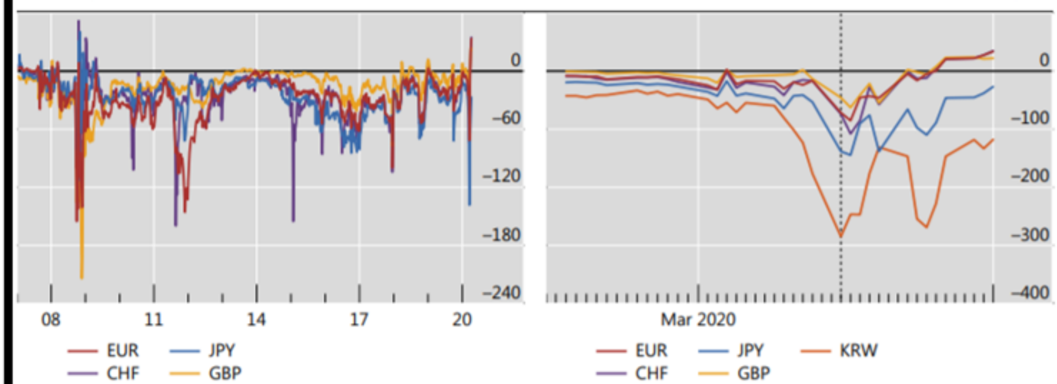
As we know, the globalization of supply chains and investments increased the USD reliance for foreign currency hedging. But when the coronavirus crisis created a surge in demand for safe and liquid assets, it limited the supply of dollars provided by banks and other financial intermediaries like prime money market funds that were facing serious redemptions. As the supply could not match the demand due to limit in expanding dealer's balance sheet, dollar funding costs indicated by the basis surged, indicating that it was more expansive to borrow dollars via FX swaps than in cash markets. (Basis is the difference between the dollar interest rate in the money market and the implied dollar interest rate from the FX swap market). Faced with this situation, non-US banks without access to central bank facilities were facing with two options: face higher funding costs or sell dollar assets (which created market disruption). The interventions of the Federal Reserve (which consisted of enhanced swap lines, availability of the funding for 9 other banks, and the possibility of a temporary repo) finally allowed a dollar access without the need of selling assets.



Three-month FX swap basis against the US dollar[1]

In basis points

Graph 1

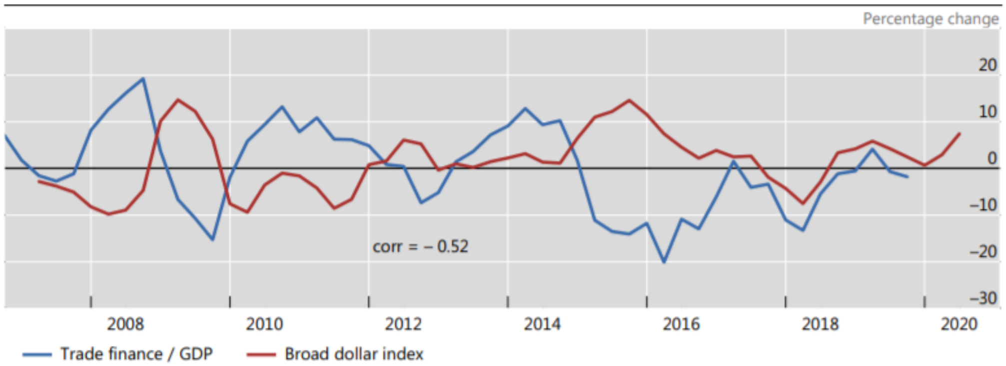


[1] Calculated exploiting the covered interest parity condition as the spread between three-month US dollar Libor and three-month FX swap-implied US dollar rates. The vertical dashed line in the right-hand panel indicates 15 March 2020 (the announcement of the enhancement of swap lines between the Federal Reserve and five central banks).

Sources: Bloomberg; BIS calculations.

Trade finance co-moves negatively with the dollar index[1]

Graph 3



[1] Percentage change (year on year). The trade finance series is constructed as an aggregate of amounts outstanding reported to the BIS by 9 central banks (DE, GB, ES, HK, JP, IT, FR, KR, US). Reporting basis differs across central banks along several dimensions such as inclusion of foreign operations of home-headquartered banks.

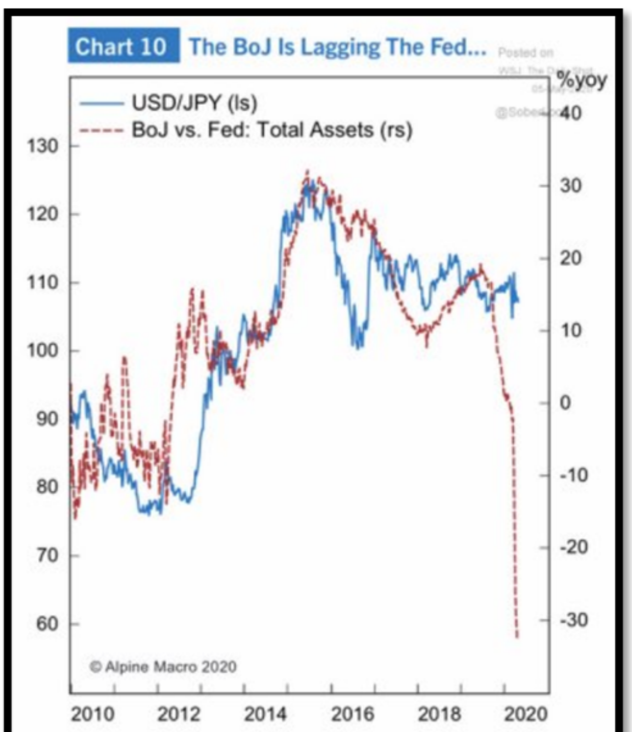
Sources: Board of Governors of the Federal Reserve System, IMF, Eurostat, BIS, authors' calculations.

Now for the longer term, the risk of aggressive easing monetary policy could drive real interest rate below those of the rest of the world, thus creating a negative interest rate differential with many countries. Combined with the higher inflation expectations, the unprecedent balance sheet expansion could lead to a serious erosion of the USD value. This will certainly benefit to all commodities priced in dollar as an inflation-hedge. *(Trade taken (+8%): Long DXY due to lower inflation expectations, until the FED announced QE)*

II. Yen outlook

As the risk aversion took up globally, we assisted to a massive self-reinforced process (margin calls on leveraged positions) of an unwinding of carry trades from high yielding environment like Brazil, Turkey, Argentina, India, Ukraine or South Africa to the low ones like Japan and Switzerland from yield-seeking investors in order to repay their low interest loans. This situation is due to the fact that a surplus of accumulated saving in those export-driven countries will go finance the current account deficit of others at a higher yield due to the larger risk. We assisted to a similar episode during 1998 when yen borrowers who were invested in emerging bonds like Russia got out as fast as possible of their trade as the country was going to default on its debt. Thus, low yielding currency values (JPY/CHF) could be seen as a global indicator of risk appetite.

Now for the *long term*, I see an appreciation of the Yen as the massive Japanese profit generated by her exports will be repatriated in the country as interest rate differentials turned positive against major currencies due to global lower expected inflation.



2) Energy outlook

Oil outlook

Low prices were created due to a sharp decrease in demand and short-lived price war between countries, which maintained production well above the current demand. Indeed, we actually saw a similar scenario in 1998 when OPEC increased output even with the lower demand coming from Russia ad Asian countries who were facing a crisis. Now in the short run, high inventories coupled with lower transportation demand will have a negative pressure on prices. But for the long term, a number of producing companies could go bankrupt as their cost of production went under the market price for too long, which will reduce even more the expected production, which could alleviate negative pressure caused by the lower demand from the transportation sector and push at a slow pace the price through a recovery.

Natural gas

Natural gas expected demand plummeted also, but at a slower pace due to the inelastic aspect of electricity needs. The expected production dropped also due to the shutting in uneconomic wells and slashing drilling capital budgets, but at a slower pace than the drop in demand, which kept prices lower but stable. Now for the long term, the expected lower supply caused by less associated gas production could lead to a good demand recovery fueled by gradual opening of offices and commercial centers, an excessive use of A/C due to confinement measures, and even a potential attraction for other countries to look at natural gas as a viable source of energy for their future economic development.

Uranium

In the case of Uranium, who is mainly used for energy and electricity consumption, the near term demand fell also like oil and natural gas but the supply has fallen even more due to the decision of multiple major producers around the world to cut their output during the crisis. This created a serious disruption as nuclear energy is seen as one of the most promising carbon-free electricity source for the future. As 90% of uranium consumption occurs in countries that have little-to-no primary production and actual inventory levels were low, uncertainty led to many major consumer to secure uranium under long-term future contracts in order to secure their product and meet the growing demand. For the long term, if production is not getting back to a level filling the future demand, prices could see a serious potential upside.

3) Precious metal and industrial metals outlook

Store of value assets can be important for a portfolio as the monetary growth is reaching record levels. Added to the global low interest rates, physicals assets and mining corporations could surge in demand if inflationary pressure are perceived. Even cryptocurrencies like Bitcoin could profit from that added to the current lower trust in the financial system. For metal related to industrial production, a close monitoring of the expected demand is necessary, but they should profit even more from the recovery.

4) Equity outlook

Expected profit growth depended a lot on different sectors. Some industries like Financials (+Transport, Defense, Tourism…) were the most affected with a deterioration of asset quality, lower interest rates and a slowing business volumes *(watch the high exposures of banks to trade finance disruption)*. Other sectors like Technology or Semiconductors saw an explosion of their profit expectations as the online economy was expanding. But for the long term, I certainly see lower corporate profits in a lot of sectors due to lower consumer spending, higher cash flows used for debt repayments and multiple bankruptcies. *(Be careful when looking at the SP500 index performance as he is largely concentrated on tech companies…)* For the future, the optimal time to start adding shorts is near the inflection point of the expected profit for global companies.

5) Fixed income

Higher savings could increase the inflows to investments firms, and as there is fewer attractive places to yield money at a national level due to lower company's borrowing, one of the only alternative is treasury bonds that will enable the government to finance its spending. Combined with the active buying of the Federal Reserve, I expect government yields to stay where they are or even go lower. For corporate bonds, the situation is more complex, but even with the fed program, I think high yield firms are still risky due to the higher long-term probability of defaults.

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