GLOBAL REPORT

2021 SECOND Semester Edition

Connected

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Summary

Introduction

The Global Report is an international macroeconomics project that aims to share an economic vision written exclusively by students from various finance and business student associations from the world's leading universities. It is a unique opportunity to connect students and readers from a multitude of backgrounds, but who share the same passion in economics and finance.

After nine successful editions, the project's greatest ambition is still the same: to establish a periodic exchange of information between as many financial companies as possible, connecting five continents in a single document and providing a broad view of the economies of many countries, from their perspective, with reliable information and easy language to all readers.

The Global Report was idealized by the Brazilian Liga de Investimentos UFRJ in 2016 and since then, several participants around the world have participated in the project, such as finance associations from Sweden, United Kingdom, Switzerland, France, Russia, Colombia, South Africa, Portugal, Kenya, and others.

This Global Report was written by Liga de Investimentos, IFSA Colombia, Investment Society and IFSA Network India.

Enjoy the reading!

Liga de Investimentos

Liga de Investimentos of Polytechnic School/UFRJ is the first organization at the Federal University of Rio de Janeiro with the objective of making the connection between the students and the financial market. Our mission is to build strong relationships with the industry and fight to bridge the gap between students, big investments companies and management consulting firms serving as a primary contact point on campus by recruiting programs, case studies, informative events and workshops.

The Brazilian inflationary outlook

Overview

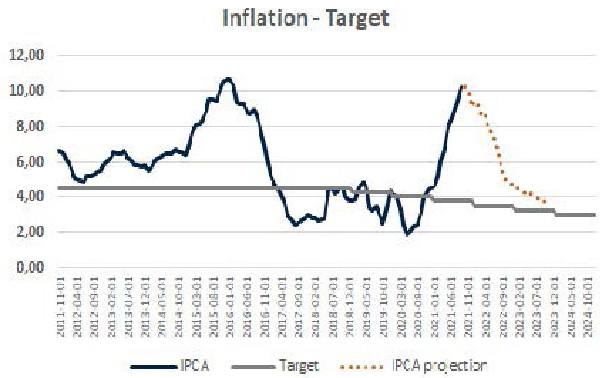
The basic economic relationship is that supply and demand determine price formation. Similarly, the relationship applies to the amount of money available in the market, if it increases, the purchasing power of each monetary unit decreases, thus reducing purchasing power. The cause of inflation is known to most people as just rising prices, but beyond that, it is mainly due to the increase in the amount of money in circulation.

Economic Problems

The impact of inflation on society happens through a chain network effect, in which those who get the money first have their income increased and feel a greater sense of purchasing power, so inflation expands until it reaches all sectors of the economy, also affecting the relationship of indirect costs and raw materials, increasing unpredictability for companies and society.

Low inflation is also an economic problem, known as deflation, which causes a continuous drop in prices, discouraging consumption, since prices tend to get cheaper in the future. Thus, the fall in consumption decreases the activity levels of a country, generating a reduction in production and an increase in layoffs. In this sense, the goal is to keep inflation under control to generate long-term predictability and to be able to generate sustainable growth in the economy.

Brazil uses the inflation targeting system intending to be the reference for the expectations of market agents and to provide a basis for the Central Bank to act and converge with the target through the use of the monetary policy. The inflation target of the country for the year 2021 is 3.75% with tolerance limits in the bands at 1.5%, in the 12-month accumulated inflation is already above 10%, indicating a situation out of control.



The change from backed currency to the practice of fiat currencies, generated facilitators for the production of inflation, with a government decision-creating paper money without ballast, increasing the volume of available capital and credit. In this sense, besides the understanding of inflation as a general price level, it is essential to study inflation as a monetary policy and its impacts.

Inflation can also be affected by fiscal policy, about the impacts on the level of activity of a country. In cases of contractionary fiscal policy, generated by falling government spending or tax increases, it can lead in the short term to price increases, but converges to falling GDP with a negative output gap caused by falling aggregate demand and the price level tends to fall. However, a conjunctural analysis of the country's economic landscape is important to evaluate the impacts of changes in fiscal policy.

Furthermore, The Fiscal Theory of Price Level describes the impact of consecutive primary deficits that can result in an increase in inflation, based on the fact that with less sustainability of the public debt, the market needs high-interest rates to maintain the financing of the treasuries. In this sense, the increase in the country's risk premium triggers the depreciation of the local currency, impacting inflation, and it may also be necessary to print money to honor debts. Therefore, in an analysis of the inflationary scenario, it is essential to follow the public debt/GDP ratio of a country.

As a tool for inflation control, the most effective tool in the short term is the basic interest rate. Over the long term, the most effective means is to expand production capacity, increase the available supply of products, and marginally reduce their prices.

Inflationary historical context

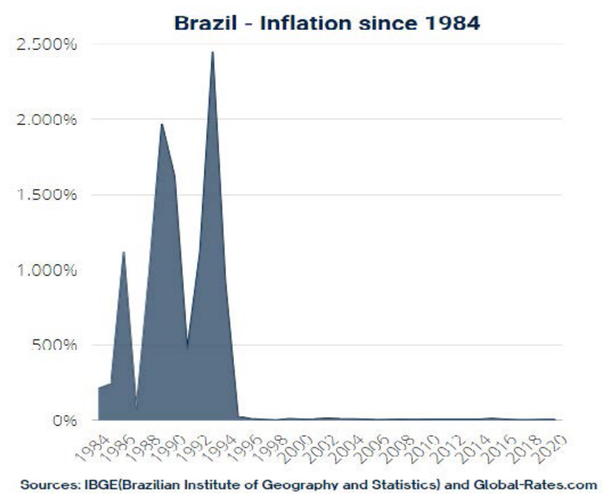
Brazil has in its historical past several moments with out of control inflation problems, decades with inflation above two digits, monetary correction, and currency devaluation. This scenario led to stock and production problems in the country, affecting mainly the low-income population and driving an increase in social inequality in Brazil.

The main causes were Brazil's economic backwardness, political corruption, increased spending during the military government with an excessive increase in foreign debt, oscillations in growth prospects, and the crisis in the world economy. The impact of the currency devaluation was reflected in daily changes in prices and the need to create several economic plans to find a definitive solution to the inflationary problem.

The Brazilian hyperinflation process during the 1980s led to an average annual inflation rate of 233.5%, mainly due to the above-mentioned facts and aggravated by the world oil crisis, which allowed the beginning of a price shock and contributed to the country's economic retraction, making it necessary during the period to increase money printing to finance the government's debt.

The Real Plan

After 5 plans and 6 currencies failed to stabilize the economy and control inflation, Fernando Henrique Cardoso, then Finance Minister in 1993 and a future president elected in 1994, put together the economic team responsible for the new program, the Real Plan. Unlike previous plans, the Real Plan aimed to attack the core of the problem, not the consequences.



While previous plans consisted of zero-cuts in the old currency, price freezes, and even confiscation of savings, the members of the Real Plan sought to attack the causes of Brazil's hyperinflation such as the serious fiscal imbalance, indexation by inflation, and the distrustful environment in which Brazil found itself. For the program to be successful, the implementation of the new plan was in stages.

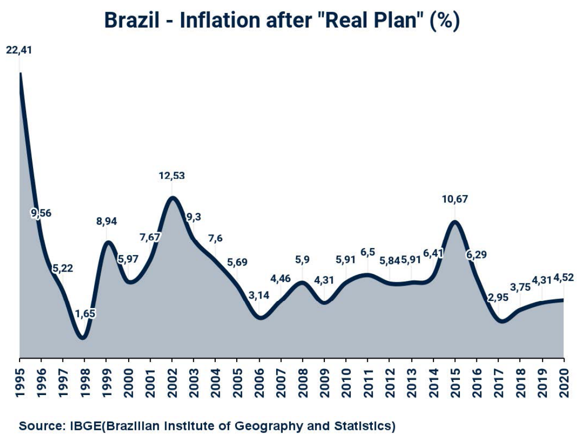
The first step was to reduce the fiscal deficit, which was done through spending cuts, tax increases, budget flexibility, and privatizations. In this first stage, Brazil also raised interest rates to attract foreign investment and reduced the amount of credit, restricting consumption.

The second phase began in March 1994 and was the implementation of the Real Value Unit, the URV. The URV was a virtual and temporary unit of account intended to hold down inflation before the launch of the Real. It consisted of a mechanism in which the payment system continued to be in Cruzeiro Real, but expressed in URV, which was adjusted daily according to price indexes.

The final phase was the transformation of the URV into the Real. The Real was officially launched in July 1994 and the new currency was pegged to the dollar in a fixed exchange rate regime. Inflation, which was almost 5000% in June 1994, ended the year at 916%, reached 22% in 1995, and reached 9.5% in 1996.

However, due to the Asian crisis in 1997 and the financial crisis in Russia in 1998, foreign investors went towards the dollar in order to protect their capital. Thus, there was a capital flight from emerging countries at that moment, destabilizing the Brazilian exchange rate. After attempts to hold the value of the dollar, Brazil abandons the fixed exchange rate regime and in 1999 adopts the Brazilian macroeconomic tripod that remains in place until today.

The tripod consists of a primary surplus, inflation targeting, and a floating exchange rate. Thus, the Real plan combined with the macroeconomic tripod allowed Brazil to have a stable currency and control inflation, ensuring budget predictability and economic stability.



Pandemic Scenario

During the pandemic, we have faced a generalized explosion of prices, which has affected, in different ways, numerous countries around the world. In this sense, to better understand this phenomenon, we need to identify its main causes.

In general lines, it is possible to observe, as the main factor of the inflationary explosion, the relationship between the rapid economic slowdown and the economic recovery with the same speed and intensity. Thus, this imbalance between supply and demand was responsible for a strong pressure on commodities and production chains worldwide.

Despite very similar conjunctures, it is possible to observe much stronger and threatening inflationary effects in emerging countries, such as Brazil, for example. When compared to richer and developed nations, emerging countries, suffering from the same issues of demand and supply shocks, have the factor of exchange rate devaluation, especially against the dollar, as a very strong aggravating factor, which directly impacted the prices of commodities and manufacturing inputs.

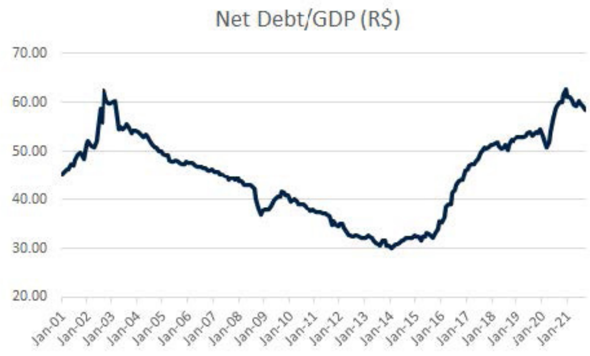
When we evaluate the case of Brazil, we observe an extremely complex scenario. We find a country that, at the same time as being a gigantic exporter of commodities, is a major importer of components and inputs for the industry.

The inflationary shock with large bases in commodity prices is clear since Brazil presents its production and export structure extremely based on the agro and extractivism sector. In addition, it is important to emphasize the impact on consumer goods. Due to a large deindustrialization process, the country is increasingly depending on imports of industrial inputs in various sectors of the economy. Thus, it is possible to explain the explosion of price increases in various products.

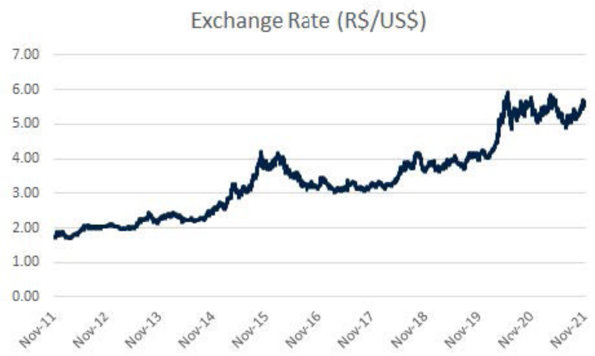
Another aggravating factor for this inflationary movement is the exchange rate issue. In fact, it is very important to understand, not only the reason for the devaluation of the Brazilian exchange rate but why our currency has been one of those that have lost the most strongly against the dollar when compared to emerging countries. The Brazilian panorama has a great cause in the size and liquidity of the international financial markets, which negotiate several securities and loans, besides the largest exchange derivatives market.

Monetary policy

Brazil's economic policy has as its strategy three main objectives to achieve the goals of the economy and social welfare. Within this policy, the term "economic tripod" was created to guide Brazil's economic policy. These three objectives consist of a floating exchange rate, an inflation target, and a fiscal target. With the pandemic outbreak of COVID-19, the Brazilian Federal Government was forced to increase spending to meet the obligations imposed by the emerging disease. Among the new expenses, it is important to highlight the construction and maintenance of field hospitals, the purchase of supplies and machinery, and, with a greater media prominence, the Emergency Aid.



In this context of increased spending, characterizing an expansionist fiscal policy necessary to combat the coronavirus, there has been an increase in the demand for some products, especially in food and daily use products. With an increase in demand and constant supply, inflation accelerated during the health crisis. From this scenario, according to the Monetary Policy, there should have been an immediate increase in the basic interest rate, the Selic rate. However, in order to stimulate the domestic economy during the crisis period, the Central Bank reduced the Selic Rate to its historical minimum, reaching a value of 2.00% per year. Thus, with the Selic Rate at its historical minimum and, therefore, the lower return on the securities traded while Brazil's country risk remains the same, the assets traded in Brazilian Real have suffered a devaluation generating an evasion of foreign capital. Meanwhile, the flight of international investors coupled with the reduction of the national interest rate culminated in the rise of the dollar to levels never seen before.



Besides the economic issues, the rumors of the Brazilian political scenario also contribute to the devaluation of the real against the US currency. Among the conjunctural factors that increase the risk in Brazil for foreign investors, it is of utmost importance to highlight the polarization of the electoral picture and the presidential elections, especially when there is uncertainty about the results and, consequently, the future economic policies.

In the meantime, from the analysis of the Brazilian economic policy and the rising exchange rate, it's possible to highlight the inflationary impacts. With greater consequences for the low-income population, the rising dollar impacts the price of imported inputs, especially for basic consumer items. Therefore, the increase in import and production costs is passed on to the coNsumer through an increase in the final price. Thus, the impact of the exchange rate on inflation is evident, as well as the reasons that led to its increase.

The interest rate impacts

The monetary policy adopted by the Brazilian Central Bank during the pandemic was also a relevant factor for the high inflation. Due to the economic crisis caused by the new coronavirus, the Central Bank started a downward cycle in the Selic Rate with the objective of fomenting investments in the economy and encouraging consumption.

The Interest Rate that in March 2020 was 4.25%, reaching its lowest historical level in August 2020 of 2.0% - a level that remained so until March 2021. Thus, the fall of the Selic Rate added to the monetary expansion and part of the production paralyzed due to the Covid-19 crisis created a demand shock. In other words, people wanted to consume and the supply was low, leading to an increase in prices.

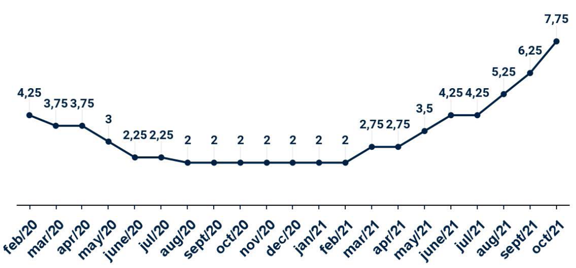
However, as people were at home and consumed fewer certain types of services, products, and utilities, even with an increase in food consumption, the impact was low on the general price index, causing the Central Bank to maintain the interest rate at 2% for many months. With the resumption of economic activity and a shock in demand, inflation began to rise at an accelerated pace, a phenomenon that happened globally.

Thus, the Central Bank started a policy of monetary tightening to contain rising inflation. Thus, since then Brazil is in a cycle of high-interest rates and consolidates the biggest monetary tightening since 2003. Since April/21 there have been successive increases in the Selic Rate, starting from 2% in March/21 and reaching 5.25% in August/21. At that time, the Monetary Committee (Copom) indicated new increases to levels above the neutral (6.5% p.a.) and expected the Selic to reach 7.5% by 2021.

However, with new components that increased pressure on inflation such as energy due to the water crisis and fuel due to the rise in commodities and the dollar, the Central Bank continued to raise interest rates further, reaching 7.75% p.a. in October/21 (1.5 p.p. increase), the highest level since 2017. Today (Oct/21), Copom's inflation projections are around 9.5% for 2021, considering the trajectory of the Selic rising to 8.75% p.a. still this year and to 9.75% p.a. in 2022.

In addition, long-term DI future contracts are with rates very close to short-term rates, indicating a possible inversion in the yield curve. In other words, this points to a risk of an economic recession. Thus, the Bacen should pay attention to the risks of this pace of increase in interest rates, despite high inflation.

The evolution of the Selic rate (% p.a.)



Source: Central Bank of Brazil

Energy crisis

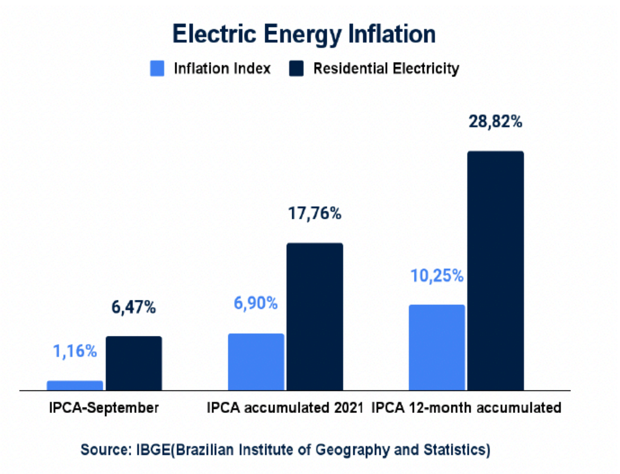
Another important component that pressures inflation to the highest level since 2015 is electricity. Electricity is the second most important component of inflation in the third quarter of 2021, only behind fuel, because the cost of energy affects the entire production chain, impacting the price of various products we consume, especially the most industrialized ones.

The cause of the growing increases in the price of electricity tariffs is the water crisis that Brazil is going through. As the country's main energy matrix is the energy from hydroelectric plants, the lack of rain and droughts directly affect the plants' reservoirs. According to data from the National Electric System Operator (ONS), Brazil is experiencing the worst drought in 91 years.

The reservoirs of the Southeast and Midwest regions of the country, responsible for 70% of energy generation, are at 16.7% of capacity and may end the month of October at 12%. These are the worst indicators since the beginning of the historical series (2001). Thus, due to the severe water shortage and the need to use thermoelectric plants and import energy from neighboring countries, the government on august/21 created a new tariff flag, valid until April/22 with an increase of almost 50% in relation to the previous flag. When we look at the accumulated inflation over the last 12 months, the increase in the price of residential electricity is almost triple the general price index.

This cycle of high prices hurts the budgets of families, especially the poorest ones. According to research, electricity compromises about 4.5% of the family budget and about 7% of the budget of low-income families. In addition, the water crisis also affects other sectors and holds back the recovery of the economy. The government expects that the tariff adjustment index will be a nominal 5% for 2022. There is also the possibility that in 2022 there will be a reduction of tariffs with the wet season and strengthening of supply resulting from the current tariff adjustment.

**The IPCA - Extended National Consumer Price Index - measures the change in the cost of living of families with an average income of 1 to 40 minimum wages.*



Food Price Changes

Besides the energy crisis, another practical example of inflation in the daily life of the population is the sharp increase in food prices. At first, it is worth mentioning that in Brazil the focus of production is on commodities and not on feeding the population. In other words, the large agro-industrial complexes destine their crops for the foreign market, especially in the current scenario in Brazil with a high exchange rate. In this way, these complexes seek the greater profitability that international trade offers, putting pressure on the country to import foodstuffs in which it was previously self-sufficient.

Assuming that the large agricultural corporations are directed to the foreign market, it is left to family farms to supply the national demand for food. Such family farming does not have the same production capacity as the agro-industrial complexes, and so there is a mismatch between the demand for food and the supply produced. In addition to the reduced production capacity, the health crisis imposed by the coronavirus and the subsequent rise in the dollar, fuel, and energy prices, increased the food industry's expenses in terms of production, transportation, and storage. The respective increase in costs, coupled with the inefficiency of public policies that do not assist small rural producers, caused the price of food to the final consumer to increase rapidly, evidencing strong inflation in the sector.

Not only logistical and economic problems for food production, but also environmental problems have impacted national productivity. In parallel to the economic and sanitary crisis of the new coronavirus, the South and part of the Southeast region experienced periods of strong frosts. At the same time, the Northeast region suffers from a shortage of rainfall in the area. Both environmental problems make the harvests smaller and, therefore, prices increase, contributing to the rise in inflation. Thus, it is evident the main causes of inflation in the food sector and its impacts, especially for the population with less purchasing power.

The Rise Of Independent Assets In Brazil

Causes

Bank Proprietary Treasuries

Big banks are known for being notorious schools of the financial maket. Many renowned assets were created within large banking institutions.

The lack of entry barriers to set up a manager is another peculiarity of the Brazilian fund market, points out Queiroz. It is common, he says, that bank treasury executives, after accumulating certain assets, set up a house to take care of their own money. "At Ataulfo de Paiva there are no more juice houses, only assets", jokes Queiroz.

The experience of the global financial crisis, the post-crisis market environment and changes to regulatory frameworks have had a marked impact on the banking sector globally. In response to their new operating landscape, banks have been re-assessing and adjusting their business strategies and models. At the same time, a number of advanced economy banking systems have to confront low profitability and legacy problems.

The first message is that while many large advanced economy banks have moved away from trading and cross-border activities, there does not appear to be clear evidence of a systemic retrenchment from core credit provision. Second, bank profitability has declined across countries, and individual banks have experienced persistently weak earnings and poor investor sentiment, suggesting a need for further cost cuting and structural adjustments. Supervisors and authorities should monitor banks' adjustment, assessing any risks that may emerge, but also play role in facilitating the process by removing impediments where necessary. Third, in line with the intended direction of the regulatory reforms, banks have significantly enhanced their balance sheet and funding resilience and curbed their involvement in certain complex activities. Nonetheless, market participants and authorities should not become complacent about the progress to date and press on with the implementation of reform.

Inadequate governance and risk management were apparent in poor risk outcomes at many banks during the crisis. They are also evident in the frequency and severity of bank conduct risk instances and associated legal and reputational costs over recent years. The need for robust risk management has perhaps become even more crucial since the crisis: supervisory expectations and stakeholder scrutiny have risen, while complexity in some aspects of risk ma agement has grown – for example, in relation to model risk and cybersecurity.

In sum, banks appear to have improved their risk governance and risk management practices since the crisis, a though further progress is often needed to meet supervisory expectations. It can be difficult to disentangle the drivers of improvements: while many reflect re ulatory and supervisory changes, banks have also been adjusting as a result of their crisis experience and market pressure.

Compensation and other incentives. In the post-crisis period, the proportion of remuneration that is variable has fallen. The share subject to deferrals and clawbacks has also risen for senior officers and material risk-taking staff. Risk now has a greater weight in ex ante remuneration decisions and is better reflected in internal capital pricing mechanisms (thus affecting pay outcomes through altered business unit profitability).Measures to increase the accountability of senior executives and boards have also been introduced by some authorities.

Selic Decline

Market interest rates tend to fall when the basic interest rate is reduced, but it is necessary to consider that this relationship between a drop in the Selic rate and a drop in real interest rates is not always automatic. It may be that the banks do not pass on the Selic drops in full or take a long time to reduce their own interest rates. In the real economy, low interest rates favor consumption and production. People start to buy more with cheaper credit and companies to produce more, increasing employability.

With regard to investments, a low interest rate scenario reduces the profitability of fixed income and may even make these incomes, which have always been a safe haven for investors in Brazil, to register negative returns when discounting inflation. This loss in value of the fixed income investment can happen in very low interest scenarios, insufficient to cover the costs of Income Tax and administration fees.

On the other hand, the stock market and the dollar, which are investments in variable income, may be favored by the drop in interest rates, as will be detailed later.

As previously mentioned, investments in variable income are indirectly related to Selic. Among these investments is the stock market, which, despite not being linked to the interest rate, is impacted by its effect on the economy.

A low interest rate scenario reduces the profitability of fixed income investments and makes variable income more attractive. With the increase of investors on the stock exchange, the stock price goes up. In addition, a lower interest rate is more attractive for companies to invest and increase their productivity, which also helps to raise the stock price.

Financial Deepening

The development of more financial products and people migrating from Fixed Income to Variable Income is a structural process that lasts a long time and takes place by the population, mainly by individuals. We have already seen it happen in developed countries and will see emerging ones in the coming decades.

We separate four important topics for you to understand what drives this event: Young investors: a crop of young influencers and content creators, interested in the investment world. Increase in the number of investors on the stock exchange: In 2011 we had less than 600 thousand investors on the stock exchange, in 2020 this number exceeds 3 million. Democratized access to information. More accessible investment platforms.

All this because we are in a worldwide process, which causes the migration of people from Fixed Income to Variable Income + sophisticated products. This is financial deepening.

Larger shelf of products offered by brokers added to the support of investment advisors / independent agents.

The large volume makes life difficult for investors, says Francisca. And, among so many options, he prefers to stay in one. “For simplicity and not having a structure that allows analyzing so many funds, the investor ends up consolidating in a single manager, with whom he already has a relationship"

"The most sophisticated investors know that there is an industry apart from the big banks, but in fact, most people have little knowledge of this and tend to pay very high management fees", says Bonomo. XP's proposal is to have one. wide offer, but experience has shown that it is necessary to help the customer to choose. "We cannot only invest in having more funds, but in filters that help the client to select the best alternatives", says Pires. For a year now, the funds have been presented on the XP platform with stars, following the ranking

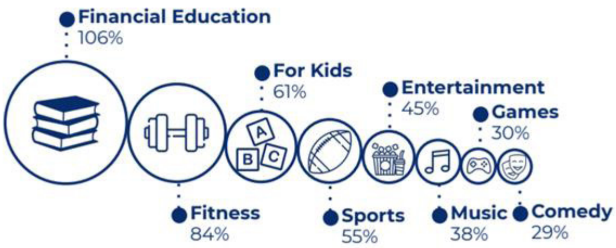
This increase in the number of investors is strongly linked to the democratization of access to financial education and investment platforms.

What is really happening ?

The Brazilian financial market was historically dominated by large banks. But a recent phenomenon has disrupted this dominance. In the last few years, the number of new Independent Asset Managements has increased exponentially, let's dive into why this happened and what it will impact in the future of the financial market of Brazil.

A key factor that impacted the growth of Independent Assets was the number of investors in the Brazilian market. As we saw in the 2021 Q1 Global Report, the number of retail investing in the financial market has grown in an unprecedented way in the last few years. In 2007, 2019 and 2020 this growth was almost of 100%. This fact impacted the hedge fund industry as investors with less experience sought these companies to invest their money. Having more money opened the possibility of the existence of new funds. And as this cycle continues, more hedge funds are open in Brazil. Just to put into context, from 2011 to 2016 approximately 100 funds were open, the same number that from 2017 to 2020. And in 2021 the "boom" was even bigger, more than 40 hedge funds opened just in the first semester.

But why the number of retail investors has grown this much? To answer this, we need to take a step back and see the impact social media is causing. In the last 4 years (2018-2021), the subject that showed the CAGR in YouTube Brazil was Financial Education with a rate of 106%. It's noticeable that this is a significant advantage from the second place in the list, with a CAGR of 84%

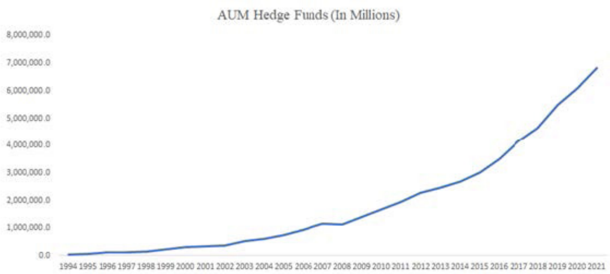


It's interesting to observe that because of this social media hype, asset managers started joining platforms such as Twitter, Instagram, Facebook, and LinkedIn. Because of that, a link was created between companies and the investors. It became the favorite way of communication of many independent assets. This fact not only helped obtain new investors, but for those who are more experienced, it brought insights and new information on the way the company operates. Many asset managers now are posting every day about subjects related to the financial market, stimulating new investors who are in the social media apps.

Social media impacted a lot by being a direct link. But, in 2020/2021, we also saw a change in the podcast industry and hedge funds used this new opportunity to reach more people. Two podcasts are worth mentioning, “Outliers” and “Stock Pickers”. They both belong to “Infomoney” (a website about news related to the financial market), which is owned by XP Inc. Stock Pickers, for example, has more than 60 thousand subscribers in the YouTube channel and some of its videos had almost 100 thousand views.

But now, let’s go back to understand what happened to the big banks, as this also impacted the number of funds. According to one of these independent assets, XP Inc, in 2010, 65% of the capital invested in funds were in the 5 biggest banks. Nowadays, this number is close to 50%. A significant change that could be even worst, if it wasn’t for the fact that these banks realized what happened, and in a strategy to regain its position, the banks started lowering the fees, lowered the starting capital needed to invest, and started new strategies with more risk for clients looking for more profit. As a result of this, the big banks stayed being the main players in the market. According to Carlos Augusto Salamonde, CEO of Itaú Asset (one of the big 5 banks) “We realized the change, the emergence of the new independent asset managements. If we didn’t do anything, in a short period of time, we would lose market share. So we concluded we needed to reposition Itaú Asset.” This manage to create new funds, as people looking for bigger risks started getting more opportunities, which increased the problem of too many funds in Brazil.

Regulation in Brazil also influence a lot in the number of funds. In the United States, for example, a Hedge Fund can have different fees for different clients. In Brazil that does not happen, so to solve this Hedge Funds creates lots of new funds. New regulation tackle this, but Brazil is still leading the number of funds in the world. Despite that, Brazil is only the 11th when talking about AUM (Assets Under Management). Looking at the graph below, we can see that in the recent years the AUM has changed drastically.



Future of the Industry

New Products

With the development of the market and the great inflow of resources, there is a growth and stabilization of the sector that brings us several questions: How will the industry be in 10 years? Will there be consolidation, or will it remain a very fragmented market? Is there room for new products? How will this affect the main companies in the financial market? To get to the answers to these questions, the analysis will focus on three major topics: the development of new products, fund mortality and the actions of large banks and brokerages.

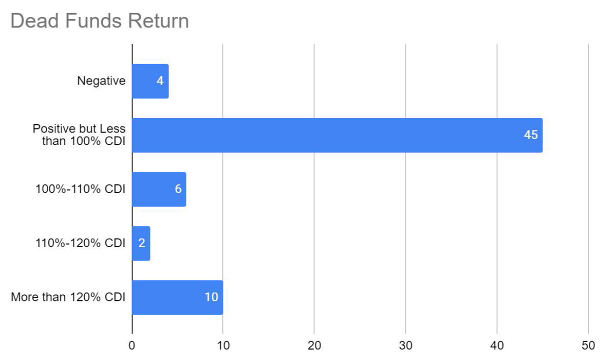
With the presence of capital surplus and the search for new uncorrelated assets in the market, three new forms of products gained prominence in the Brazilian hedge fund market: Quants, Credit and ESG. The former are not a category of funds per se, but a form of investment using quantitative algorithms and strategies, thus seeking to eliminate the human emotional factor from the equation. Following international trends, since in the US 7 of the 10 largest hedge funds use quantitative strategies, Brazil has seen in the last two years a large growth in the quant industry, reaching 2% of the national investment fund sector. This movement has as its main exponent the Giant Steps, the largest quantitative manager in Latin America with around R$ 7 billion under management. Despite the recent growth, there is a possible increase in the participation of quant funds in the market, mainly due to the importance of the automated processing of data and information, in addition to the lack of correlation between these products and the main options in the market.

Another product that also stood out with the recent expansion was private credit funds. These are funds that invest at least 50% of their amount in fixed income securities of private companies. These funds seek to explore the spread between the rates offered by companies versus those offered by the government, and may also participate in financing projects for infrastructure and basic sanitation. Following the international trend, despite a drop in 2020 due to the pandemic, credit funds are once again becoming a relevant part of the industry, proof of this is that renowned houses are developing areas linked to credit such as SPX Capital, whose credit area is already exceeds R$1 billion in AuM, and Legacy Capital. As with quant funds, medium-term growth is expected for the area. Finally, ESG investment-linked funds are becoming a global trend and this could not be different in Brazil. With the pillar of sustainable investments, this type of fund is still at an embryonic stage in the country, but it shows certain highlights, such as the investment of R$ 200 million made by Volkswagen in an ESG fund from XP Inc. Using environmental and social criteria and governance, there is a strong demand for increased investments in this type of asset in the country.

Hedge Funds Longevity

With the large amount of funds emerging, a question that investors ask themselves is which of these funds will survive in the long term and which of them will no longer be active. For the historical analysis of this question, Nord Research, a renowned independent analysis house, conducted a survey based on the IHFA, the main index of hedge funds in the country, and found that the funds have a mortality rate of approximately 65%. In other words, in the last decade, 67 of the 103 managers present in the index are no longer in the market.

The main reason for this fact is the fund's performance, although the majority had a positive performance, 67% of the funds had a positive performance below the CDI and 6% a negative performance. In this way, poor performance encourages rescues by shareholders and makes new funding difficult, entering a vicious cycle that leads to the loss of good professionals, lower returns and, eventually, the closing of the fund or merger with other players. not all funds that close lead the shareholder to lose 100% of the investment, most of it is returned to the shareholder or incorporated into a new fund.



In the Brazilian market, the most recent example observed was that of Mauá Capital. The company of former Central Bank director Luiz Fernando Figueiredo ended the management of macro hedge funds, despite continuing on other fronts. The fund, which had assets of BRL 330 million in 2018, was in 2021 with BRL 37 million, this was mainly caused by the low performance of 4.68% in the last 36 months of operation, well below the CDI . Therefore, we can expect industry consolidation in the long term, where players that do not maintain a risk management policy, good professionals and, consequently, good performance, have great chances of leaving the industry or being incorporated by players who have obtained better results.

Big Banks Action

The growth of independent assets affected the dynamics of the financial market, eroding the profits of the largest financial companies, banks and brokerages in the country. However, inertia is not an option for these large market players who are already starting to move towards market consolidation. Initially, traditional banks only opened their investment platforms to receive independent funds, bringing more options to the client and gaining part of the rebate, but this alone was not enough. Thus, traditional banks and brokerages started to act in two ways to recover lost income: investment in team and own funds and equity participation in independent assets. In the first case, we can observe the emergence of funds linked to large houses with a relevant presence in the market, such as XP Macro and Itaú Hedge Plus.

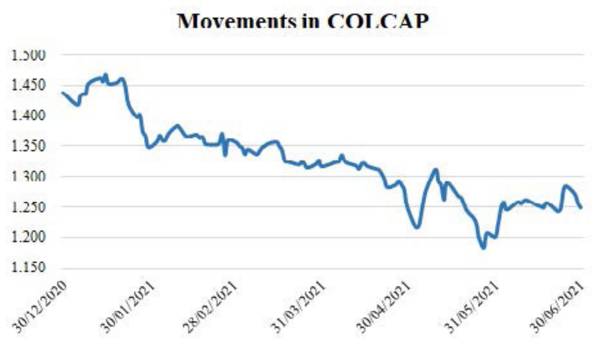
The second strategy proved to be the main one among large companies, XP bought part of Giant Steps and Itaú was the main player in this scenario. In addition to buying a stake in Asset 1, the bank developed a multi-desk structure so that various assets could work within the structure of the bank itself, this fact attracted Quantamental, a quantitative manager from Rio de Janeiro, and part of the Bahia Asset team to the Optimus Titan fund , in this way, managers focus only on the investment part, while the entire operational and back office structure is provided by the bank. In addition, Itaú also developed the fund called Rising Stars, whose main objective is to finance new assets in a kind of private equity, allowing exposure to the growth of the fund market in the country and allowing association with new houses that may or may not have success in the market.

IFSA Colombia

We aim to share financial knowledge upon the different superior education institutions, colleges and universities via webinars, conferences and projects. Also, as we are a community of future professionals with high ethic and excellence values, we generate social impact on our communities through educational or application projects.

A quota of optimism.
Capital Markets

Figure 1. Movements in COLCAP



Source: Own elaboration graph made from the data of: https://www.bvc.com.co/pps/tibco/portalbvc

The pandemic has reached every market in the world. For some countries the recovery has been faster. In Colombia, the COLCAP index has diminished 14,10% from Q4-2020 to Q2-2021 reaching its peak on January 14th and its lowest on May 27th. However, since the transition to the MSCI COLCAP on May 28th, the index is recovering and has reported earnings.

Still economic worries are lingering: Standard & Poor's and Fitch Ratings lowered Colombia's long-term foreign currency rating, the country faces persistent fiscal weakness and gives uncertainty to the markets due to the protests and the intermittent economic reactivation (La República, 2020).

On the other hand, the financial sector represents 46% of the index which has kept the Colombian stock market under pressure, as the economic crisis hit the profits of financial entities. Moreover, the trading volume is diminishing and most of the equities are depreciated. Investors expect a performance of the index over 1,500 points by the end of the year.

The Colcap stock index contains the shares with the highest liquidity in BVC. For the cut from Q1-2021 to Q2-2021, the share with the highest valuation is Preferencial Avianca with a growth of 49%. Because of the reorganization process that the company endured as it exited Chapter 11 of the US bankruptcy law, there is a greater extent of market expectations. It is followed by Cementos Argos with a growth of 11% and Ecopetrol with 5%, which have been valued in the market, largely for the total reopening of the commercial and tourist area, for which it has maintained high levels of sales, together with its new alliances and partnerships that takes them to strengthen.

Below 3 actions that show a continuous decrease from Q1 2021 to Q2 2021. BVC shows a downward trend due to the behavior of two sectors that have a significant contribution to BVC's shares, which are the agriculture and financial sectors. At the same time, the negative behavior of Cemex Latin Holding and Grupo Argos due to the decrease in home sales, the non-execution of 4G projects and the suspension of infrastructure programs. The above, supported by the intermittent economic reactivation that does not allow these sectors to advance.

LatAm
LOGISTIC PROPERTIES

Taken from the website: https://latamlp.com/en

Perhaps one of the most important issues of equities in Colombia is the arrival of a new issuer to the Colombian Securities Exchange - BVC. LatAm Logistic Properties formally launched its public offering notice to enlist in the BVC. LLP develops and manages real estate businesses with a focus on the logistic and industrial business. It is in Colombia, Perú and Costa Rica and manages a land area of 400 km2.

The purpose of the LLP issuance is to enhance the company's business in the places where it is currently located and to reach countries such as: Chile, Panama, and Ecuador.

Introduction

Timeline Fintech Colombia: Digital Revolution

In an increasingly globalized world, technology has come to the forefront as the preferred medium in which we diffuse information in the blink of an eye. It has sharply changed the way we conduct our daily lives.

The South American country of Colombia is proof that it's not slowing down any time soon. Developing countries are now tapping into the power of the Digital Revolution to solve what were once thought to be unsolvable problems. These include absolute poverty, education inaccessibility, fossil fuel dependency, and fatal illnesses. This technology helps impoverished people and nations develop their resources and consequently lift them out of poverty.

Banking is one of the largest industries to wholeheartedly embrace disruptive digital technologies, like digital banking and fintech (financial technology), Fintech in Colombia 2019 has grown due to the country's knowledge of the power that technology can have on a nation.

Laws Concerning Fintech in Colombia

Colombian President Ivan Duque pushed for the passing of Ley TIC, which hopes to modernize the New Information Technology and Communications sector (TIC). This would digitally connect 20 million Colombians that previously did not have a reliable internet connection.

This Ley TIC (TIC Law) recently passed the Colombian House of Representatives (June 5, 2019) with 93 positive votes and is currently on President Duque's desk for his approval. In a June 2019 speech at a banking convention, Duque himself called to amplify financial service coverage via digital platforms, and subsequently, give way to inclusion.

Fintech Growth in Colombia's Banking Sector

With smartphone usage at an all-time high, some of Colombia's largest banks like Davivienda and BanColombia are using fintech to facilitate growth and customer interaction.

This has not stopped unorthodox banking solutions from entering the Fintech Colombian market. Banks like Nequi and Bankity offer alternatives to those who do not have access to (or those who choose not to use) traditional commercial banks.

Nequi follows a similar business model as M-PESA: they offer a free service using mobile technology, in which consumers may deposit, withdraw, transfer and manage their money using already-established infrastructure.

Bankity, on the other hand, is more involved, helping consumers track their personal finances using a smartphone app and an intelligent bank card.

Investors have taken notice of all this growth. They have funneled over $7 billion USD in venture capital investments throughout all of Latin America. This includes Colombian startups Platzi and Rappi, who have raised millions from international and domestic venture capitals.

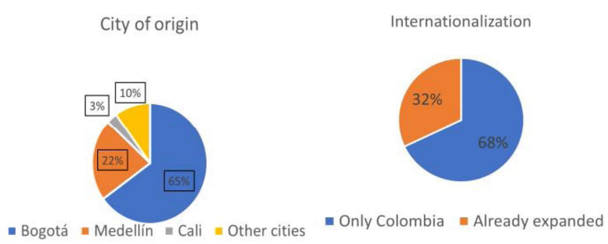
Limitations of Fintech Development in Colombia

Of course, there are challenges and setbacks to Fintech growth in Colombia, such as the financial transaction tax and general concerns about privacy and security online.

Both of these drive many businesses and consumers to remain cash-only and avoid the hassle. But that hasn't stopped fintech in Colombia from thriving

Colombia has secured its spot as the third-largest fintech ecosystem in the region with 200 startups, after Brazil and Mexico. It holds one of the largest potentials in LATAM because of its expected growth, and is shaping up to be a prime location for those that seek to expand their operations down south.

Figure 2. Fintech Radar Colombia



Source: Own elaboration graph

In Colombia, the Fintech market has had an exponential growth in recent years. In 2018, about 124 startups were recorded, 61% more than those recorded in 2017. This type of growth is due to the implementation of technology and innovation by investors. However, an important factor to consider for the growth of Fintech, has to do with the population of the region, since the segmentation in this market is given by the ages between 25- 34 years, and from 35- 44 years. This segment represents 28% of the total population in the country.

On the other hand, in monetary terms, Colombia is the fifth country with a considerable investment in the Fintech market. According to Asobancaria, for 2018, it had a representation of 11.6 M USD. In recent years, this figure has increased by 60%, due to the importance of the financial, technological and entrepreneurial world. In Latin America, 1166 companies were registered in the Fintech industry in 2018. The contributing countries were Colombia, Brazil, Argentina, Mexico and Costa Rica.

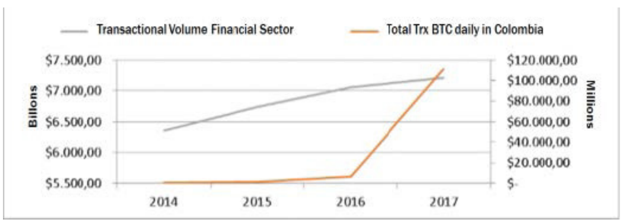
As Fintech is a dynamic market, it is essential to guarantee competition on equal terms, with the focus on the customer and the new market needs that arise over the years. Within the new strategies and possibilities for growth, the focus is now given by artificial intelligence, Big Data, and other technologies that seek to provide a solution to the needs of customers in general in all financial sectors.

The arrival of cryptocurrencies in Colombia such as Bitcoin has had a several impact in the financial area. Given that these virtual currencies are one of the most recent phenomena, there is still much uncertainty about its regulation, impact, and value for the economy in general. Due to the increase in its price, virtual currencies are still becoming popular every day, causing many people to start to invest in this type of cryptocurrencies. However, there is much uncertainty about these currencies because they can be used for dark aims.

In Colombia, cryptocurrencies such as Bitcoin are not regulated and even the Financial Superintendence of Colombia (FSC) said (Circular 19 of 2014) that any banking institution under their supervision cannot invest, save, or guard any type of cryptocurrencies. The Central Bank of Colombia said that (Concept #20348 of 2016) the Colombian peso is the only legal method of payment and for not having a backing from another central bank the exchange regime doesn't apply and cannot be used directly in the country. For those reasons, the congress of the republic issued law 268 of 2019, where bitcoin and other cryptocurrencies are catalogued as crypto assets. This category allows people to use Bitcoin as a medium of exchange and, ultimately, as a means of payment for goods and services.

Equally important, many experts defend that Bitcoin is a tool that facilitates asset laundering, terrorism financing and brings with itself the discourage of bancarization. Beyond being a problem of regulation, it becomes a situation where there is no control and thus encourages illegal transactions whose recipient and sender are unknown, causing uncertainty for the economy and creating an impact in tax collection directly associated with these transactions. Despite this, the number of transactions with bitcoin is increasing because of the high return it offers in short time, causing that many investors use this currency as it can be appreciated in the following graph:

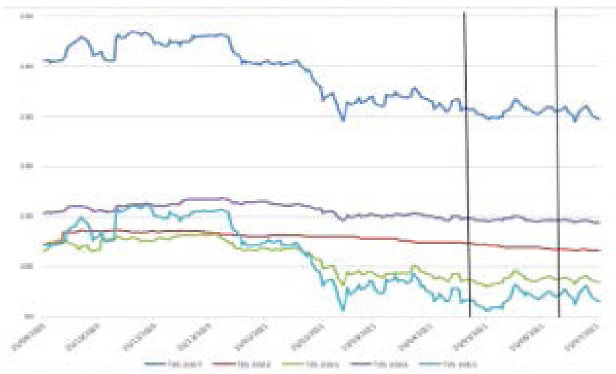
Figure 3. BTC vs. Pesos transaction volume growth in Colombia



Source: Méndez, L., Castro, A., Serrato, D., Navarrete. & Pérez, R. (2018) Cryptocurrencies and their impact on the Colombian economy. [Figure 3]

During the time of confinement, there was a decrease in the price of bonds (therefore an increase in the trading rates of these) due to the high risk and uncertainty that the country and its economy had, also explained by fiscal instability, along with strikes, low consumption and inflation, Additionally, during May 19 and July 1, 2021, the largest risk rating agencies worldwide, announced the decrease in Colombia's investment grade, which is reflected in the two black lines with a greater decrease in the price of TES mainly seen in long-term debt, which is the one whose sensitivity to macroeconomic and fiscal events is greater.

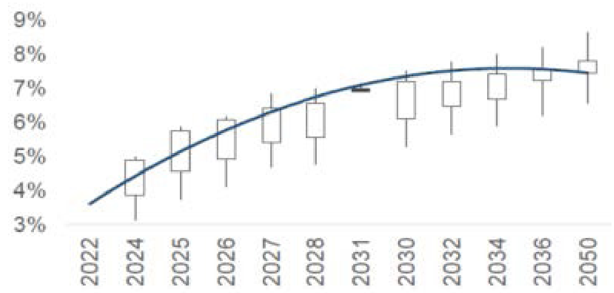
Figure 4. Colombian Government Bonds



Source: Bloomberg. Own construction

Additionally, within the movement of the curve of the last year in the TES of the different maturities, there was a maximum decrease towards levels -3% in the TES of 2024 also for the entire curve. It's movement was bullish causing the curve to move to yields of approximately 7%, as well as a slight flattening in the long-term TES reflecting expectations of moderate future economic growth.

Figure 5. TES-COP movement over the last year



Source: Casa de Bolsa

According to the confirmed public offerings for the BVC (Colombian Stock Exchange), it is expected that for the next semester the approximate total amount will be $ 6,560,000,000,000 in securities where most are bonds on average to 3 years backed by a good rating, In addition, it is still an appetite for the fixed income market.

A comparison was made between the prices of the 10-year bonds of Mexico and Paraguay against those of Colombia, considering their sovereign debt rating where these countries represent the extremes against Colombia; this is due to the added account of Mexico's BBB and Paraguay's rating of BB, according to S&P Global, and this reflects the threshold between investment grade and speculative grade in which our country is located (with a rating of BB+).

This represents how during 2020-2021 the price of Colombian bonds decreased and reached values below those of Mexico by the end of the period under observation, despite having in the latter country a better risk rating, but taking into account the political instability of Mexico the market could be encouraged to have greater confidence in Colombia. Which makes it possible for the country to have access to the collection of resources.

Fintechs, a quest for Colombian digitalization

Overview

The fintech deployment in Colombia has had a rough path due to its tech and adaptation dynamics of its population. Even though its significant progress, there are still obstructions that complicate its implementation, such as poverty and mobile penetration. According to the Ministry of ICT during the first quarter of 2021 the internet connection has reached 8 million over the domestic territory. As stated by Colombia Fintech the lengthening of the pandemic has help over 2 million people to have its first approaching to the internet to use digital wallets and this allows us to infer that as connectivity in rural areas improves and financial education increases, Colombia will be an empowered territory in terms of digital transactions.

That said, the creation of new fintechs in Colombia is a great challenge for individuals. Although this activity is promoted by the Financial Superintendence through the Innova SFC program, entrepreneurs face the challenge of identifying possible opportunities in the market according to the needs of the consumer. In addition, consumers' lack of knowledge about technological innovations in the financial system makes it almost impossible for an individual to create a Fintech company. However, increasing advances in terms of internet coverage in the country and financial education are gradually reversing this situation.

On the other hand, companies have been encouraged to bet on the financial and technological ecosystem, thanks to the tools that have been provided as a result of the pandemic. According to the latest study of Colombia Fintech, in the business sector, about 9,300 jobs have been created, between 2019 and 2020 there was an increase of 38%. These companies focus on the business of providing digital credits to microenterprises, in addition to creating different platforms to improve other services, such as virtual wallets or platforms for remittances.

The path for the fintech progress

Colombia has had a great growth in the creation of fintechs between 2016 and 2019 with an increase of 134%, with an accumulated 322 fintechs in 2021. The most representative cities are Bogota with a share of 67.7% and Medellin with 18.2%. Most of their services are related to payments, remittances, loans, and wealth management. Thanks to this, it is possible to access credit efficiently and at a low cost.

By 2020, payments in virtual channels accounted for 73% of the transactions performed. From this, 18% of transactions were executed through ATMs, an equal proportion to payment terminals, 17% were made through the Internet and 16% through mobile phones and only 9% through branches.

The pandemic stimulated the use of digital banking applications; in 2020, 35.6% of the population made transactions through apps. The sector has presented an exponential growth that includes digital wallets and this shows the need for digital financial services that allow transactions to be carried out quickly and securely.

Ecosystem

Although the growth rate of the number of Colombian fintechs for 2020 was only 2%, this does not mean the weakening of the ecosystem, the death rate of fintech startups did not exceed 14% and in 2021 astronomical investment rounds were closed; with players such as Addi, Zinobe, Finaktiva and Treinta raising together more than 160 million dollars, which respond to the liquidity needs of SMEs.

Investment in latam fintechs marked a historic milestone, multiplying 12.3 times by 2021 compared to 2020, this financing for Latin America is 86.3% investor capital and 12.6% debt. The Colombian case is different; more than half comes from debt and only has a 2.2% market share of fundraising, Brazil has 78% and Mexico 14%.

Government's efforts to provide financing through credit lines for startups that solve financial inclusion problems also generate value for the ecosystem

The pandemic was the beginning of the accelerated growth of these solutions but there is still room for expansion in multiple sectors, it will be vital to explore how the Colombian fintech market evolves with proposals particular to Latin American culture.

The course of private equity in Colombia

Private equity sector in Colombia has more than 122 active funds amounting USD 16,895 million. The businessmen in private equity (PE) invests in several sector of the national economy where energy, real estate, services, and infrastructure are the more prominent.1 (Investincolombia.com.co, 2019)

In Colombia, private equity funds are regulated through the decree 2555 of 2010 and its modification in the decree 1242 of 2013. We can define private equity like a mechanism or vehicle for attracting or managing sums of money or other assets that are integrated with the contribution of several people managed collectively to obtain joint economic results attracting or managing sums of money or other assets that are integrated with the contribution of several people managed collectively to obtain joint economic results.2 (Investinbogota.org, 2018)

¿How is the situation of the private equity in Colombia

Private equity sector is projected like a segment with great potential, and it has presented important growth since its establishment in the country. The sector presented a compound annual growth of 23.6% between 1995 - 2018. In 2018 It reached available capital compromises of USD 5,688 million and an invested capital of USD 10,315 million. The Colombian Government has understood that the attraction of private equity funds is essential for the economic growth and development, for this reason since 2019 Colombia has a regulatory framework exclusive for this kind of vehicle that promotes the creation of local funds. (Investincolombia.com.co, FONDOS DE CAPITAL PRIVADO, 2019)

Key Sector Data

The fintech Transactional track record (TTR) published in the middle of May of 2019 the ranking of buffets that during the covid-19 crisis has archived to highlight with the number of consultancies and big operations in the category of private equity and venture capital.

In the category of number of transactions, the buffet DLA Pipe Martinez Beltran led the list, followed by Brigard Urrutia and Acumen Legal who occupied the second and third place respectively. In the category of mobilized capital by transactional consultancy the ranking has little variation, DLA Pipe Martinez Beltran ranked first with USD 45 million; ACUMEN legal ranked in the second place with USD 38 million; finally, Gomez Pinzon ranked in the third place with USD 35 million. For the number of transactions, the buffet DLA pipe Martinez Beltran led the list; Brigard Urrutia (6) and Acumen Legal (2) got the second and third place, respectively. Regarding mobilized capital by transactional consultancy, the ranking has a little of variation with DLA Pipe Martinez Beltran (US 45 million) in the first place; ACUMEN legal in the second place with USD 38 million; and finally, Gomez Pinzon with USD 35 million.

In 2020, private equity market had optimistic numbers, that in the country, since the beginning of the covid -19 crisis, it reported a total of 11 transactions, of which three of them have an amount of US 203.5 million. Although these data mean a decrease of 31.24 % in the number of transactions and a fall of 87% in mobilized capital compared with the last year.

Most relevant transactions

The most relevant investments during 2020 that positioned Colombian firms in the TTR ranking are the following. First, we have DLA Piper Martínez

Beltrán, leader of the ranking, who in the Private Equity sector advised the operation of Reve Group, a group that received the millionaire investment of US $ 35 million from Australia Partners, Altra Investments, and other investors whose identity it is kept secret 3(Larepublica.co, 2021).

Investment Banking: Impact of COVID- 19 on Securities Issuance and Placement in Colombia

During the year 2020, the world was shaken by an unprecedented pandemic with high levels of contagion and mortality that caused forced quarantines, shutting down the productive apparatus of countries. Central banks played a decisive role with expansive monetary policies and economic stimuli aimed at providing liquidity to the market; however, consumption and inflation levels were historically low in the face of a scenario of high liquidity, which generated a favorable scenario for issuers to lower the cost of their financial liabilities through issues in the capital markets.

Colombia was no stranger to this trend, where the year began with a repo rate of 4.25 and ended at 1.75 levels. Inflation in 2020 closed at 1.61%, with GDP decreasing to levels of 6.80 (DANE, 2020), however, this was not an impediment for issuers to go to the capital market to seek long-term funding, taking advantage of low rates and excess liquidity of investors. In 2020, corporate issues were made for Cop $12 Tn with a demand that reached Cop $23 Tn.

However, 2021 has not ceased to be a year of uncertainty, since, despite the rapid advances in vaccination programs in developed countries, new variations of the virus continue to cause concern (International Monetary Fund, 2021). However, after the end of the second quarter of the year, both the domestic and foreign economies have shown a marked recovery since the measures taken by governments in response to the contagions have not affected mobility and the operations of the productive sectors to a greater extent (Bancolombia Group, 2021).

For 2021, significant global economic growth is expected; the economies of China and the United States are growing at an accelerated pace, and it is expected that by the end of the year each will contribute more than 25% of world growth (World Bank Group, 2021). In macroeconomic terms, this represents an increase in external demand and in the flow of remittances, so there is greater household consumption and a rise in prices. U.S. inflation and economic data have led the FED to announce the beginning of tapering and a possible rate hike for 2022.

The Colombian economy is moving at a solid pace where domestic consumption has been above pre-pandemic levels and inflation is at 4.40, which prompted the Central Bank to raise the intervention rate by 25 bps with room for a new 25 bps increase. These contractionary policies have motivated issuers to seek resources in the capital market to anticipate a rate increase, seeking to lower the cost of their financial liabilities by extending the terms at historically low rates. So far in 2021, Cop $8 bn have been issued and an avalanche of new issues is expected for the remainder of the year.

Investment banks benefit the most

For the global Investment Banking industry, the economic context derived from the covid19 was the ideal scenario to lead processes focused on reducing the financial cost of corporate liabilities through structured credits or issuances in the capital markets; in addition, corporate restructuring processes increased with mergers, acquisitions and other operations aimed at optimizing organizational structures, acquisitions and other operations aimed at optimizing organizational structures, which caused an excessive workload for investment banks that positively impacted their income to the point of implementing measures of drastic salary increases to compensate for the workload and retain their best talent.

In Colombia, between 2020 and 2021 corporate issuances were made in the order of Cop $20 bn, where the active participation of Bancolombia's Group banks stands out, which placed 38% and 49% of the total issuances in 2020 and 2021, respectively.

Corporate Law in Colombia

The Colombian financial sector is made up of financial institutions and its managed funds. Under the supervision of the Financial Superintendence find the following types of institutions: (i) credit institutions (EC); (ii) financial services companies (FSS) and(iii) other financial institutions.

In fact, since Law 45 of 1990, the model of parent and subsidiary with the aim of eliminating disadvantages of a specialized banking and at the same time having some benefits of universal banking, in such a way that it had control over aspects such as: i) the regulation and supervision of conflicts of interest that may arise; (ii) the possible existence of capital, and iii) the presence of the risk of contagion.

In the current circumstances and trends, issues of commercial and economic law reform are of paramount interest to politics and society. The creation and sustainability of economic growth, a better quality of life for the average citizen, and the stability of the economic and financial systems are unavoidably imperative. This situation requires a viable (safe) banking law, as well as other systems of commercial and financial law of considerable sophistication and high integrity and transparency.

Main Challenges

Trust in crowdfunding. Financing alternatives different from those traditionally known, and that entail greater confidence despite the business limits to access them, may a priori not seem reliable. Even less if the legislation does not dare to give a complete regulation that generates legal certainty.

In Colombia, Decree 1357 of 2018 initiated an interesting approach to regulate Crowdfunding and mitigate the distrust that the figure can generate. Thus, from article 2.41.3.1.1 a series of rules are established for the recipients of resources and for productive projects. In this way, they have the obligation to inform the entity that is carrying out the collaborative financing activity in terms of aspects about the financial credibility of the recipients and the productive project. The following two articles also enshrine other rules such as the maximum amount of funding and the minimum number of carriers and maximum publication period.

Legislative Challenges

Various regulations in the financial sector, among them, the modification of law 20.009 that establishes a liability limitation regime for holders or users of payment cards and electronic transactions in case of loss, theft, robbery, or fraud through law 21.234 that regulated such liability, RAN 20-10 issued by the CMF and law 21.236 related to Financial Potability.

Regulatory Sandbox

Mechanism that responds to the need to drive regulation at the pace of innovation: Closed test environment, designed to experiment in a safe and controlled manner. In the digital economy: "testing ground for new business models that are not yet protected by existing regulation, overseen by regulatory institutions. Goal: Accommodate regulations and the growth of businesses, so that regulation is not an obstacle to their development, without leaving consumers' rights unprotected.

The Hub

"It is the innovation office of the Superintendencia Financiera de Colombia (SFC) that supports, advises, guides and receives feedback from supervised and non-controlled entities on issues related to financial and technological innovation. It is the point of contact for the SFC and stakeholders in the fintech ecosystem."

Investment Society

With just under 800 members from various faculties and a leadership team of 17, InvestSoc (InvestmentSociety) UCT is the largest student executive society in SouthAfrica. Forover 17 years, the society has aimed to assist its members with bridging the gap between university and the world of work. With this goal in mind, InvestSoc has continual engagements with members throughout the year consisting of networking events, workshops, webinars, learning platforms and keynotes in order to give its talented pool of members the opportunity to grow professionally and form valuable relationships with leading corporates, entrepreneurs and professionals from various industries.

South Africa, Economic Deconstruction

Gross Domestic Product

Alongside African powerhouses Nigeria and Egypt, South Africa completes the podium for the largest contributor to African GDP. A country who once enjoyed GDP growth of over 3% between 1994 and 2011 has seen this trend diminish over the last decade where GDP growth has averaged 0.4% against a backdrop of political and socio-economic turmoil.

The economy is expected to bounce back by 4% in the coming year, the highest in nearly a decade. Additionally, while historical growth has been slow, the country is a net exporter and therefore relies on the health of its trade partners for its own performance. These partners are expected to grow at 6% and are anticipated to bolster domestic growth as a result.

Inflation

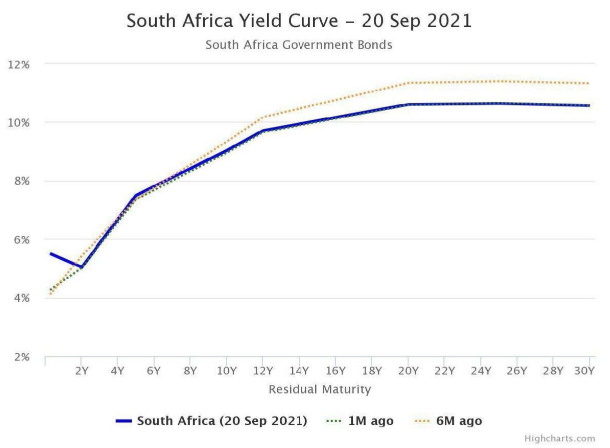
Throughout the 1970s's and 1980's, global inflation rose notably due to oil price shocks. South Africa experienced a soaring inflation rate of near 20% in those years, additionally due to their substantially higher growth in money supply than their trade partners. This trend has discontinued and has since exhibited a steady decline to a rate varying between 4.6% in 2018 to 3.2% in 2020. This is aligned with the South African Government's inflation target range of between 3% and 6%, with a midpoint of 4.5%

Interest Rates, Credit Ratings & Yields

COVID-19 has wreaked havoc on the South African economy, and the South African Reserve Bank (SARB) has responded by cutting interest rates to an all-time low of 3.5 percent to cushion the shock of the pandemic (Phillips et al, 2021). Interest rates have been at an all-time low for about a year. However, when SA rebounds from the third wave produced by the delta variation, there is consideration of normalizing rates (Reuters, 2021). Furthermore, this came at a period when several concerns were occurring, such as a weak domestic currency, domestic fiscal pressure, reduced credit ratings, and widespread unemployment, therefore this cut was warranted to some extent. (2020, FitchRatings)

South Africa's credit rating on foreign currency bonds was lowered by Fitch from BB to BB-, moving the bond further into the junk category with a negative outlook (FitchRatings, 2020). The key drivers of the downgrade are high and rising government debt, as well as weak fiscal soundness. To begin with, an increase in the Debt to GDP ratio from 80.78 percent is concerning since it indicates that borrowings are growing faster than the revenue base. The government's debt problem was aggravated by the Covid19 outbreak, which resulted in a $4.3 billion IMF loan (FitchRatings, 2020). Second, weakening fiscal strength increases the likelihood of default, which might result in South Africa (SA) being unable to service its debts. It is an indication of declining revenues and ballooning expenditure. In South Africa's situation, worsening of fiscal strength entails an increase in the budget deficit, which affects South Africa's ability to pay its debts, hence the downgrade. According to FitchRatings (2020), the government's measures to curb spending (e.g., freezing the wage bill to improve the surplus by 1.75 percent of GDP) are difficult to achieve. South Africa's credit ratings have suffered as a result of failing to address these issues.

Foreign investors have begun to sell South African fixed income assets, with R6 billion worth of bonds being sold, according to JSE statistics, reversing R6.1 billion in purchases made in the fourth quarter of 2020, when there were some signs of improvement before the third wave arrived (Theunissen, 2021). As a result, bond yields have reached new highs as a result of the high dumping of bonds combined with the rating reduction. Furthermore, as illustrated by the yield curve, the market expects interest rates to rise over time, and this estimate has shifted somewhat to the conservative side since the beginning of the year due to unanticipated consequences from the spread of the Delta version. (Theunissen, 2021). Nevertheless, a future decrease in yields and higher bond prices is likely to occur for South Africa.



Cigarette & Alcohol Ban, Black Market Trade

South Africa's approach to flattening the curve was unlike many other economies. It included the ban on the sale of alcohol and tobacco which was aimed at clearing hospital beds of wounded drunks to make space for Covid-19 patients, as well as limit incentives for gatherings. This came as a surprise considering the contribution each of those industries make to the overall economy, where alcohol sales contribute 1.1% to domestic GDP and 220,000 jobs. On the other hand, South Africa ranks sixth in the world for alcohol consumed per drinker according to data from the World Health Organisation and annually, 44,000 citizens die from smoking-related diseases.

After four bans of such products, the illicit trade of alcohol, and cigarettes in particular, began to soar. An anonymous survey of 33,000 individuals noted a 250% increase in cigarette prices within 3 months of the ban. It comes with no surprise that illicit traders were attracted to the potential profits available, especially considering the weak frameworks in place to track these trades, as well as a police force which has been criticised for being ineffective. The illicit sales are acting as an additional drain on the economy's resources which are now being expended in an effort to stop illicit sales. The economy, which already has a weak tax collection framework, is yet to set up a system to track the cigarette supply chain, yielding billions in lost revenues. The latest National Treasury forecast indicated an expected tax collection on cigarettes that is down by a fifth compared to its collection two years ago.

It is estimated that 15% of South Africa's alcohol industry is illicit or run by organised crime, amounting to a R6.4 billion loss for the economy. While there are justified reasons to criticise the decisions made by government relating to the alcohol ban, actuarial research found that alcohol bans were more effective at flattening the curve than implementing curfews. It was found that deaths were 50% lower as a result of banning liquor as opposed to implementing curfews which curbed death counts by 26%. While this explains the reasoning behind the bans, it was ultimately a trade-off between saving lives and economic activity, the latter of which took the burden of the alcohol and cigarette bans.

Inequality and Looting

South Africa is ranked by the World Bank as one of the most unequal countries in the world (World Bank, 2018:11). At 63.0 points, South Africa has the highest Gini coefficient globally, with more than half of the population living in poverty while the richest 10% control 71% of the country's wealth (International Monetary Fund, 2020:5). Inequality is high, persistent, and has increased since South Africa's first democratic elections in 1994 (World Bank, 2018:11).

The consequences of South Africa's income inequality include slower GDP growth, reduced income mobility, greater household debt, political polarization, and higher poverty rates (International Monetary Fund, 2020:3). Local government is aware of these realities and has acknowledged the implications it might have for the country's democracy. According to the current National Development Plan, no democracy can survive if the majority of its people live in poverty, without land, and without tangible prospects for a better life (National Planning Commission, 2012:27). Therefore, addressing poverty must be the first priority of a democratic government.

In July of this year, South Africa bore witness mass violence and unprecedented levels of civil unrest unlike anything since the end of Apartheid (The Economist, 2021). Tens of thousands of businesses and shops were looted and vandalised, shopping malls levelled to the ground, vehicles set alight, and debris left everywhere (Times Live, 2021). The police force, outnumbered and overwhelmed, were unable to contain the violence and what followed was over a week of protesting, rioting, and general lawlessness in some of the biggest cities in South Africa (Business Tech, 2021).The unrest cost the national GDP approximately R50 billion (SAPOA, 2021).

Businesses affected by the looting would need to start from scratch, while others would not reopen at all, putting 150,000 jobs at risk (SAPOA, 2021). In the aftermath of the rioting, the government started investigating the feasibility of a basic income grant to address poverty and structural inequalities in the economy (Business Tech, 2021). Trade unions stressed that the lootings called for a change of mindset at a government level, and an acknowledgement that the current unemployment and poverty levels are unsustainable (Business Tech, 2021).

While the violence might have been instigated by former President Zuma's arrest, it was fuelled by job layoffs and economic inequality worsened by the pandemic (Sky News, 2021). It was a dire reminder of what the government had known since 1994, which is that if eradicating poverty and structural economic inequalities is not made its first priority, the country's young democracy will not survive.

South African Airways

The state-owned airline, South African Airways (SAA), has been bleeding money and incurring losses over the past 10 years. Over the past decade, the government has used taxpayers' money of more than R25 billion in the bailouts and guaranteed loans for the airline. This amounts to almost R5000 per registered taxpayer in South Africa. The true extent of SAA's losses over the years is unclear as it hasn't been reporting results since 2017. SAA's financial disaster has a historic trail that began in 1991 when the government deregulated the domestic airline industry and allowed any company to fly any route – competition increased. The airline began losing its 95% dominant position to new entries in the market, particularly to Comair and FlySafair. Other major factors include political interference by the Gupta family during former president Jacob Zuma's tenure, purchasing of non-sustainable planes, debt burdens, maintenance problems, weakening Rand and leadership turmoil (Wasserman, 2020).

SAA entered business rescue in December 2019 and was handed back to the board in 2021. This process had a cost of R231 million, where R78 million went into business rescue practitioners (Ndenze, 2021). In 2021 minister of public enterprises Pravin Gordhan announced Takatso Consortium as a strategic equity partner for SAA, where he said the consortium would alleviate government support for the airline. The SAA-Takatso deal has since been under scrutiny however it is anticipated to close before the end of 2021 (Ntshidi, 2021).

Eskom

Eskom is South Africa's monopoly power utility and its importance to the society and economy is unquestionable. The financial woes of the state-owned entity are a Southern African region concern. A confluence of institutional and external factors has culminated in numerous national blackouts and unsustainable levels of debt (Phalatse, 2020). Eskom's total debt has been increasing over the past years, from R77 billion in 2006 to R604 billion by March 2019. This represents an estimated 17% of total sovereign debt, 62% of which is guaranteed by the government. The Medupi and Kusile power plant programmes have been mired in R200 billion corruption and mismanagement scandals. Global coal prices are at record lows, due to the growing agenda for less fossil fuel production. As global demand decreases it should be mirrored through lower tariffs. However, not in South Africa where the cost of energy has been increasing because of Eskom's costly build programme (Eberhard, 2021). In December 2018, President Cyril Ramaphosa revisited the unbundling of Eskom and appointed a task team to advise the government on avenues to resolve challenges faced by Eskom.

Eskom accounts for more than 40% of South Africa's emissions and has made the country the 12th biggest emitter globally. In July 2021, Eskom CEO Andre de Ruyter suggested a facility from development-finance institutions to aid Eskom in their plans of closing coal plants and transitioning into renewable energy. This resulted in officials from the U.K, U.S, France and Germany engaging to form an agreement with the power utility for their transition and lower emissions. A range of funding options will be discussed during the official's visit to South Africa. Any agreement made could be announced at the 2021 United Nations Climate Change Conference known as COP26 (Bloomberg, 2021).

Unemployment & Education

South Africa prior to the COVID-19 (coronavirus) pandemic was already in a vulnerable position with unemployment steadily increasing and an overall poor response to the desire for sustainable job creation. The impact of the COVID-19 pandemic not only worsened the state of the labour market but exposed several structural and frictional weaknesses that can be described as the "Achilles heel" within the economy.

South Africa's unemployment rate

(using the strict definition) increased by 4.3% from March 2020 to June 2021 resulting in an unemployment rate of 34.4% (Statssa,2021:7). Of particular importance in South Africa is youth unemployment. Youth in the South African perspective includes persons between the ages of 15-34 years old. For the group aged between 15-24, an unemployment rate of 64.4% was recorded while for the 25-34 years old group an unemployment rate of 42.9% was recorded(Statssa,2021:15). The data shown is representative of the immense inequality and mismatch of skills within the labour market as many of the job losses occurred amongst those within the lowest income bracket and who could not manage the shift to a work-at-home environment. Furthermore, the data also encapsulates the need for greater youth intervention and, according to President Cyril Ramaphosa, needs to be the “foremost priority” for the South African government going forward (CityPress,2021).

The desire for sustainable job creation has been on the table for many years but due to slow progress and poor response from the South African government it has left many members of the youth feeling discouraged, unmotivated, and discontent. The impact of COVID-19 has shown that sustainable job creation cannot simply be the act of creating jobs within sectors but now needs to shift to actively supporting youth entrepreneurship. Entrepreneurship is a powerful tool, especially in the context of South Africa, but it can only be used effectively if it is encouraged as a viable career option for young people(Daily Dispatch,2021). For South Africa to witness a tangible change in the unemployment rate there needs to be support in the forms of bursaries that target potential entrepreneurs in disadvantaged groups so that more graduate with a high level of education and skill. There also needs to be easy access to mentorship programmes that encourage graduates to create employment for themselves in areas such as agriculture and manufacturing as these are two of the biggest sectors within South Africa(Daily Dispatch,2021).

A big emphasis also needs to be placed on education at the secondary level as this inherently affects the response to sustainable job creation. Just within this year, over 75 school days were lost as result of the pandemic and over 400 000 students have dropped out of school over the past 16 months with the majority coming from the informal or rural settlements (African Economic Outlook,2021:30). This not only increases the inequality gap in the education system but also affects the future generation of working-class people.

Whilst it is clear that South Africa’s labour market faces a deeper issue at hand, using old tactics and methods will not suffice in trying to alleviate the overall high unemployment rate. However, by moving towards a future in which there’s a focus on youth development and entrepreneurship South Africa can begin to combat the epidemic that is unemployment

IFSA INDIA

IFSA Network India is the Indian leg of IFSA Network based out of Shaheed Sukhdev College of Business Studies, University of Delhi currently operating in 5 branches across India.We aim to empower,educate and connect future finance and business leaders while fostering a culture of personal development through international case competitions, corporate live projects and networking events.

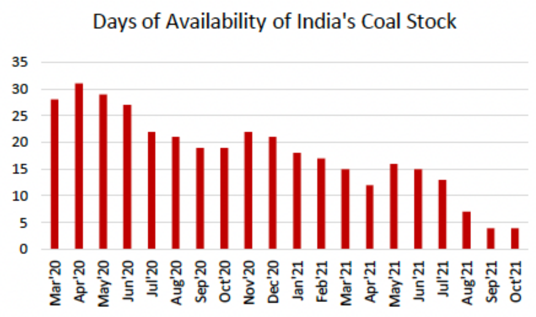
Energy in India: Coal Crisis and the Aftermath

OVERVIEW

After the inevitable global economic slump of 2020 caused by the coronavirus pandemic, 2021 witnessed a promising recovery. As the businesses across sectors started to get back on track due to sudden spike in demand, so increases their energy requirements to meet the required production. As a result, various countries have experienced massive power shortages since May 2021, and these shortages don't seem to fade away quickly. In fact, various economists have suggested that due to the power shocks around the world, the progress made towards adopting renewable energy might get further delayed. In order to tackle climate change, the shift to renewable energy is necessary, but a turbulent transition could prove harmful.

INDIA'S COAL CRUNCH

Being heavily reliant on coal as the main source of energy production, Indian industries usually have coal inventory sufficient for 30 days, but in the past month, these stocks have depleted rapidly to barely a few days' worth of coal requirements.



Source: National Power Portal

A number of factors led to this coal crunch.

Firstly, India's promising recovery post the 2nd wave of the pandemic led to surging demand for energy. Consumption jumped by over 16% from August 2019 to August 2021. Despite past trends suggesting that India's energy demands are the highest in October, Coal India, the national coal mining monopoly failed to anticipate this sudden rebound of demand.

Secondly, poor weather conditions made matters worse for sourcing coal. Even though India has the world's 5th largest coal reserves with the capacity to suffice its coal needs for years to come, doesn't mean they always can. Heavy rainfall in India's coal belt flooded coal mines and disturbed supply chains.

Lastly, it needs to be kept in mind that both China and India rely heavily on coal produced electricity. China's heavy investment and production in 2021, in a bid to back-peddle the economic consequences of Covid-19, has caused major coal shortages in various provinces of the country. Additionally, rains in the Chinese province of Shanxi also disrupted their own country's supply, and the international spot rates for coal soared at a time of pre-existing shortage.

ECONOMIC IMPACT

About 75% of the coal in India is consumed in the power sector. In addition, other industries like steel, cement, fertilizers, chemicals, paper and thousands of medium and small-scale industries are also dependent on coal for their process and energy requirements. In the transport sector, though direct consumption of coal by the Railways is almost negligible on account of phasing out of steam locomotives, the energy requirement for electric traction is still dependent on coal converted into electric power.

Even as the coal supply crunch jeopardizes possible power disruptions across the country, several non-power industries, encompassing steel to oil refineries, also face a looming risk to their operations. Electricity powers everything, so the entire manufacturing sector- cement, steel, construction - everything gets impacted once there is a coal shortage. The demand for electricity is rising with economic activity resuming in the country. The power demand in August 2021 was 17% higher than the pre-Covid-19 level of August 2019, according to the government sources.

The prices of imported coal have reached a record high amid the coal shortage. Due to this the production costs of commodities such as iron, steel and aluminium are expected to rise. The shortage may even cause the scaling down of operations.

Iron Industry

Production of commodities like iron can be deeply impacted by such a coal crisis in the country. While the price of domestic coal has increased by an estimated 15 per cent between July and October of 2021, the rally in imported coal prices has been much steeper, with prices reaching all-time high levels, and registering a sharper increase of 61 per cent between July and October of 2021. This is expected to result in an increase of about $75/MT between this period for a domestic sponge iron producer. While the manufacturers might be able to shift some of this burden to the consumers, their margins would still come under pressure for FY22 unless they roll out further price hikes

Steel Industry

Some major steel manufacturers have their own power production units and are not currently facing an energy crisis. However, market players are of the opinion that the next two months will be critical for steel producers unless the current coal shortage is dealt with. Smaller steel mills that depend on electricity supplied by power plants could face production setbacks if they experience power outages caused by the coal shortage.

Aluminium Industry

Aluminium makers are among other major coal users that may be forced to choose between shutting down operations or running their plants at much higher costs, using imported or auctioned domestic coal. For aluminium, electricity accounts for almost 40% of the production cost. A power cut of more than two hours can cause the molten metal in the potline to become solid, forcing the smelting unit to shut down for at least six months, according to the Aluminium Association of India.

Oil Refineries

Oil refineries are likely to experience a jump in demand if the coal shortage continues. The country’s major oil refineries are not dependent on coal and are not expected to witness any power outages.

However, any increase in demand may lead to LNG imports, the prices of which have surged in the international market.

Smaller manufacturing units such as plastic and synthetic rubber, which are dependent on coal, could continue to operate via diesel generators. However, this is likely to lead to a jump in the production costs of these units.

Frozen Food Industry

Power outages are expected to have a major impact on the frozen foods industry as it among the most vulnerable sectors. The industry can rely on diesel generators for electricity in case of power outages. However, this would inflate the operational costs and negatively impact profits.

Poultry, meat and dairy industries are expected to face similar challenges in case of a power shortage.

Cement Industry

The majority of brick makers in the country are dependent on imported coal as fuel. With coal prices soaring in the international market, brick makers may fall back on the domestic supply of coal. This will put further strain on the already stressed supply chain.

Economy as a whole

Amidst a global power crisis, this absolute dependence on imports has massive repercussions on our economy, impacting our trade deficit and increasing susceptibility to OPEC and Oil Prices. The reason is multi-fold, if we look to import from neighbouring nations, they're struggling with the spike in price due to high demand because of how coal-intensive the Southeast Asian economies are. And as for other energy producing nations, the global spike in demand coupled with an international shipping crisis will ensure inordinate shipping charges driving up the cost. Along with this, there are many costs which we often overlook, in 2019 26.45 percent of total deaths in India were from Thermal Power Plants, and our GDP fell by 1.45% due to Air Pollution.

The biggest brunt amidst all this is faced by the economically underprivileged section of the society. At the end of the day, if businesses import coal, they will further pass on this higher cost to consumers, thus increasing the price of most goods, reducing the purchasing power of the consumers, and descending the economy into inflation.

In addition to the rising cost of consumer goods, a surge in the cost of electricity will be felt by consumers. This can be coupled with potential power cuts in the country to manage the limited supply which can further lead to problems in the functioning of SMEs and inconvenience in the daily activities of the common man who will be the most affected by the aggravated crisis.

NATURAL GAS: A less likely alternative

Natural gas as an alternative fuel in the era of coal crisis is an unfeasible pipedream for Indian industries. This is because it's supply hasn't been able to even sufficiently fulfil the needs of European countries, it's most prominent consumer, and has wreaked major havoc. Electricity prices are up by 161%, 48% and 36% for Britain, France and Germany respectively. This is because major electricity production is dependent on natural gas (the supply of which has been disrupted) and wind (the lack of which has caused problems).

Russia hasn't been particularly kind to western Europe by intentionally supplying lesser natural gas to these countries. This may have been done to make its case stronger for getting approval for the Nord Stream 2 gas pipeline, opening another passageway for supplying natural gas to

Europe. Amis this power tussle, India stepping in and voicing its demands is only going to make the matters worse, and the economic repercussions of it will trickle down across the globe, including India.

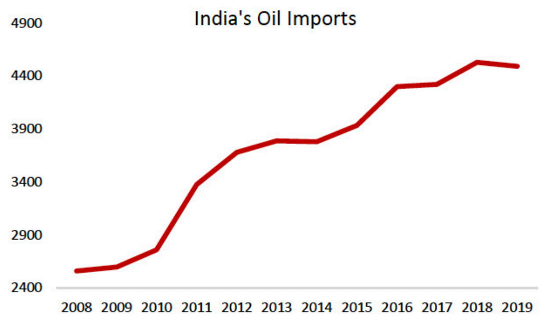
AUSTRALIAN COAL: A Breath of Fresh Air

India, the largest producer and importer of coal had only one day reserve on the 10th of October. The threat of a nationwide blackout loomed largely. Fortunately for us, a rift between Australia and China came as the silver lining that we desperately needed to come out of, what could have been, a catastrophic power shortage.

A political spat between the dragons and the kangaroos escalated into a full-blown trade war. Due to this, tonnes of Australian coal had been just sitting there in China for months no and they wouldn't use it, despite a massive energy crunch looming over the country. As the stockpiles of coal hit record lows in India, it decided to get itself a deal and buy the Australian Thermal coal stranded at Chinese warehouses, at dirt cheat discounted rate of \$12-\$15 a ton. And with this, India somehow escaped an economic disaster fuelled by coal crunch.

WHERE WE STAND

Even though the current crisis was contained before it could disrupt the Indian economy just as when it was starting to pick up again, energy demand is forecasted to scale up massively in the coming years, supported mostly by increasing urbanization and industrialization. The crisis at hand is a kind reminder that the future depends on our ability to pivot and increase our utilization of renewable energy.

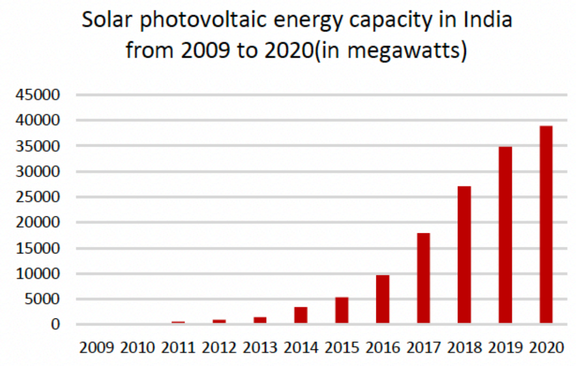


Source: To be added

And since India is still a developing economy, working hard towards providing enough supply of energy to its vast needs, it has the chance to shift more proactively towards a greener production of electricity. Sadly, India's progress towards that has been lackluster at best. Hopefully though, this over dependence on coal that caused a setback to India's recovery plans, might just be the push that the country needs to diversify its energy sources. Current government's plans to bring solar energy to wider use and adoption have certainly been impressive. The change however, needs to be rapid and hopefully, before it's too late.

SOLAR ENERGY: India's Efforts towards a Renewable Future

With about 300 clear and sunny days in a year, the calculated solar energy incidence on India's land area is about 5000 trillion kilowatt-hours (kWh) per year, hence India is in a geographically facilitative location to exploit and use Solar energy.



Source: To be added

We can see from the above graph that India through its national Solar Mission has made considerable progress and there have been some notable achievements along the way. India is now the cheapest solar power-producing nation in the world.

This paints a very rosy picture of solar energy prospects in India and makes it seem as if India has a ready solution to the Energy crisis. However, this is far from the truth, India still faces some significant challenges that it needs to address. Achieving the status of the cheapest solar power-producing nation was built on Chinese imports. India imports 85 percent of its solar wafer requirement from China, a component without which Solar Panels cannot be produced.

The Journey of India's Solar Dependence on China

In 2011, the National Solar Mission began with DCR (Domestic content Requirement) to produce solar panels and a maximum percentage of the raw materials had to be sourced and developed in India.

This was supposed to ensure that India develops along the entire supply chain.

However, in 2014, the United States appealed to WTO that this practice was unfair, as India had provided incentives to local manufacturers. Which according to them was against the GATT agreement. WTO ruled in favour of the United States. Hence the push to locally produce components was halted.

This stagnated the development of India's solar energy supply chain and led to its dependence on China.

Actions undertaken by the Government

The Ministry of New and Renewable Energy spearheads India's transition to a solar-powered economy. In 2014 it rolled out a scheme for the development of solar parks and ultra-mega solar power projects, intending to consolidate solar power generation, reduce operating costs and increase the pace of project completion. The capacity under this scheme has been enhanced from 20000 MW to 40000 MW and is scheduled to be completed by 2022.

The Central Public Sector Undertaking Scheme (phase 2) is a scheme that aims to set up 12000 MW of grid-connected solar power capacity. Under this scheme, government-owned PSUs can produce solar energy using domestically procured solar cells in a WTO-compliant manner. The government provides these organizations with viability gap funding of up to 70 lakhs to undertake power generation.

The PM KUSUM scheme aims to bring solar power to rural India. Under this scheme renewable energy-based power plants of 500KW to 2MW, will be set up on barren land of farmers, co-operatives, panchayats, etc. The power generated will be sold by the farmer to a local DISCOM. The government provides Procurement Based Incentives (PBI) @ 40 paise/kWh or Rs. 6.60 lakhs/MW/year to DISCOMS to purchase this power.

The second and third components of this scheme incentivize irrigation using solar-powered pumps.

The government also has a Production Linked Incentive Scheme - 'National Programme on High-Efficiency Solar PV Modules'. It aims to reduce import dependence by promoting the production of solar power modules in India. It involves the allocation of 4500 crore rupees over a period of 5 years and aims to add over 10 GW of the capacity of integrated solar photovoltaic manufacturing plants.

Levying of import duties is another avenue pursued by the government to promote domestic production. From 1st April 2022, import duties of 20% on solar cells and 40% on modules will be implemented.

The Indian government has also been at forefront in promoting a world-over shift to renewable sources of energy. The most significant contribution of the Indian government towards a shift to cleaner sources of energy has been the - **One Sun, One World, One Grid (henceforth OSOWOG)**. OSOWOG made its first appearance on a global platform when the idea was floated by Prime Minister Narendra Modi in the first assembly of the International Solar Alliance (ISA). OSOWOG aims at connecting 140 countries through a "common grid" that will be used as a channel for transfer of solar power. The mantra behind the plan is that in essence "the sun never sets" as it is always a constant at some or the other geographical location at any given point of time. The aim of the initiative is to generate round the clock electricity from the sun, as it sets in one part of the world and it rises in the other.

All these measures point towards the government's commitment to a renewable future. However, these measures are not easy to implement, an increase in import duties will result in tariff hikes by project developers.

There are severe delays in DSICOMS disbursing payments to farmers for excess power sold. Solarization of grid-connected agricultural pumps is still a long way off due to the low rate of metered connections in rural areas.

Various measures of MNRE have not kick-started domestic production of cells and modules as domestic production still accounts for only one-tenth and one-third of the domestic requirement, respectively.

The areas that could be further strengthened when it comes to implementation of OSOWOG include mechanism for cost sharing, structured process for implementation and a futuristic mechanism for maintaining local, regional and global grid stability that factors in issues such as frequency, voltage and grid specifications.

CONCLUSION

India's efforts towards solarization are commendable. The strong will of the government to create a "Solar World" has already borne fruit as we have more than doubled our renewable energy capacity, seen an exponential growth in solar energy capacity which increased by over 15 times and been ranked 3rd in Ernst & Young's Renewable Energy Country Attractive Index,2021. However, we are still in the nascent stage of solar energy adoption. Continued efforts by the government in the development of rural electricity infrastructure, domestic production of solar cells will over a period of time sustain India's requirements and play a pivotal role in making the country's future a green one.

GLOBAL REPORT

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