# Vista Macro



This monthly letter refers to the months of February and March 2020.

Vista Hedge FIM and Vista Multiestrategia FIM returned 0.37% and 0.66% in February and 1.29% and 3.17% in March, respectively.

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# **Management aspects**

In the midst of the current global crisis and important developments in the markets, we would like to highlight some key points regarding our management model before commenting on results and fund's positions.

It is not the first time that we have made such an analysis and it certainly will not be the last.

It is an important exercise to review and improve the way we operate and to get even closer to our customers. In order to obtain long-term returns we must be aligned with our shareholders. It also requires a thorough knowledge of the product.

Vista Capital family of multimarket funds (macro, or multi-strategy) adopts an investment model slightly different from other funds, which makes it difficult to rank them according to the most common fund's types.

There is no right or wrong in portfolio management. Several distinct and winning models coexist on the market. However, as a manager or investor (or both, which is your case), it is essential to be comfortable with your model especially during moments of stress.

Absolute return and non-traditional benchmarks, domestic and international allocation, long-term positions, steady use of hedging for directional positions, stress as main measure of risk – having volatility as a "by-product"–, low correlation with other multimarket funds, with the stock exchange and, in particular, with interest rates in Brazil are some of the main characteristics of our management model. After more than 5 intense years of track record, we have enough findings to evaluate and change, when necessary, the strategy and its implementation.

We went through the stress of the fiscal target review in 2015, the impeachment in 2016, the Temer/Joesley audio in 2017, the truckers strike, the hardening of the FED and the Brazilian elections in 2018, the Argentine elections in 2019, and now we are going through the coronavirus crisis. Table 1 shows how our positions behaved each month:

Event	Period	Performance
Stress of the fiscal target	jun/15 - jul/15	7,6%
Dilma Impeachment	apr/16	8,6%
Joesley Day	may/17	0,5%
Truckers strike	may/18	9,1%
2018 Brazilian Election	aug/18 - oct/18	9,5%
Tightening of the FED	dec/18	0,2%
Argentina elections	aug/19	-3,1%
COVID-19	feb/20 - mar/20	3,9%

Table 1: Performance in times of stress



The exhaustive implementation of hedging was key for portfolio protection and strong performance, especially in situations where we were quite unsuccessful in our long-term directional positions.

However, hedging is not risk-free. While they usually are a success instead of a failure, sometimes investments considered as hedge could add losses to the directional position, as noted in February 2019 and November 2017.

The highlighted events also show something that we often repeat about risk management: high volatility does not mean high stress, a true measure of risk, in our view.

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In 2020 - the year that makes all the previous 5 years easy - the behavior has not been different, at least until now.

In period of crisis, our portfolio strengthens its longterm characteristic, which has already been seen other times, based on positions kept for up to 3 or 4 years, with small switches, despite changes in the short-term scenario.

We started the year with the same positions we have now, practically the same size within the portfolio: a position in Petrobras, another one in Greek stocks and the British Pound, and short in currencies (South African rand and Turkish pound). Maintaining positions in this period requires the use

of hedging and patience (which, in turn, requires the correct choice of the liabilities mentioned above), without any expectation of good returns on short-term positions.

During the expressive and steep fall of the market over the last 2 months, the fund registered positive returns, although it maintained a relevant position in Petrobras, one of the worst performing assets in the period.

Accumulated losses in this investment were setoff, as shown in Table 2 below, by using all possible hedging instruments: short in American and French stock exchanges; long in Turkish and South African CDS; short in emerging currencies; long in French and Italian interest rates versus short in German interest rates; short in USA credit securities (in order to protect the portfolio in case of an oil devaluation affecting shale oil producing companies); long in Brazilian interest rates and short in Real.

Performance Feb-Mar		
Strategy	Attribution	
EUA	5,3%	
France	3,6%	
Equities	8,9%	
CDS Turkey	0,7%	
Credit	2,8%	
Europe Rates	1,6%	
Brazil Rates	4,6%	
Fixed Income	9,7%	
USDZAR	3,7%	
USDTRY	2,3%	
USDBRL	1,4%	
Currencies	7,4%	
Main Gains	26,0%	
Petrobras	-22,7%	
Others	0,5%	
Total	3,8%	

Table 2: Main contributors and detractors



Once again, the result shows a portfolio behavior that is uncorrelated and independent of any index or *benchmark* (see history of monthly returns correlation with the IBOVESPA in Graph 1).

Unfortunately, the performance could not be better due to the oil double shock (COVID-19 and OPEC) given our anticipated pessimism with the market.

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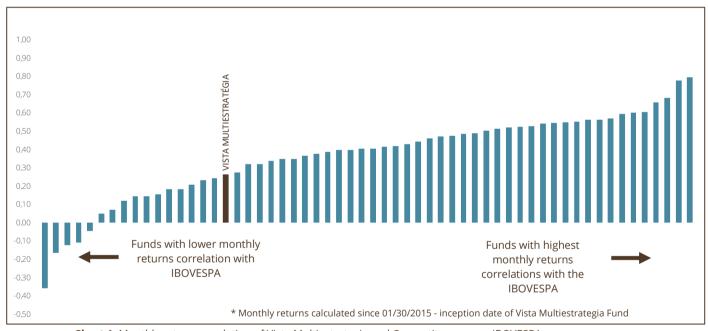


Chart 1: Monthly return correlation of Vista Multiestrategia and Competitors versus IBOVESPA



# **Current positioning**

In our January Monthly Letter, we explained our most defensive position and recognized the difficulty of properly assessing the risk that the coronavirus presented to society:

"(...) In general, we positioned the portfolio for a more defensive stance. Some points call our attention and should stay on the radar in the coming months, therefore we keep a slightly more defensive posture: (i) the Coronavirus is not fully understood yet, and the strong reaction of the Chinese government, building emergency hospitals, putting entire regions in lockdown, does not allow us to ignore the theme. If it were a "normal" flu, there was no need to build hospitals urgently and abnormally; (...) "

The high amount of information we have had access to since the message above was written has hardly changed our ability to express an assertive opinion about the virus's aggressiveness, so we remain conservative.

Within our circle of competence, the economic consequences unfold quickly and we begin to see the potential effects.

At moments as the current one, it is common to look at the past and try to identify similarities.

Many parallels are drawn with the 2008 Crisis and, especially, with the 1929 Great Crisis. In both cases a sharp credit crisis happened, followed by errors from economic policy makers.

In 2008, it is fair to say that the United States was fortunate enough to have Ben Bernanke<sup>1</sup> as chairman of the Fed. One of the greatest scholars of the 1929 Great Crisis, Bernanke learned from the mistakes made back then that differentiate that crisis from the present: a contraction of almost 30% of the monetary base; FED not acting as a last resort lender; use of the gold standard, which prevented further monetary stimulus; and the rise in real interest rates, due to the rate increase and the great deflation that hit asset prices.

On one hand, the American government's reticence in the bailout package led to the bankruptcy of Lehman Brothers, which froze the credit market. On the other hand, the FED responded to the relevant deflationary risk by initiating a process that would shape monetary policy in the following years. Quantitative easing - or the liquidity expansion - imposed to the crisis a shorter, less painful end and with no rebound (as it happens in 1930).

The instrument was used numerous times while the Bernanke was chairman.

Liquidity, liquidity and liquidity. The direction of the global liquidity was always an excellent cornerstone for Fund's positioning. In 2018, we held a short position in the US stock exchange due to the liquidity reduction promoted by the FED.

<sup>&</sup>lt;sup>1</sup>Ben Shalom Bernanke was chairman of the FED between 2006 and 2014.



In 2019 we held a long position in risky assets when the trade war imposed risks of recession and forced interest rates to fall, despite the implicit risks of economic slowdown and market consensus.

For 12 years, the market relied on high liquidity and sought incessantly for yield. Any change in the scenario is sensitive to the assets.

The coronavirus impact on social and economic arrangement had brought the Federal Reserve back to the center of the stage.

Bernanke repeated for years that in order to avoid economic catastrophe one should sin by excess, avoiding at all costs a process of deflation, the father of all evils for the economy. The economic disorganization derived from assets are cheaper and debts are more expensive tomorrow is of arduous reversion.

In 2020, the Fed's reaction left little doubts about its will and it was as it should be: big and fast. The toolkit, which in other situations took months to be used, was back in the game in days. Credit purchase, balance sheet expansion, interest rates reduction and execution of microeconomic measures.

The adjustment of monetary policy was accompanied by fiscal policy. Government and Congress made available a 2 trillion dollar package, recognizing that the current crisis is not a monetary one. It is an economic crisis, compared by some to a

natural disaster, which causes an unprecedented demand shock, whose liquidity provided by the central bank is not capable of resolving itself.

The damage to many companies and families cash flow has no historical precedent and, in addition to the expansionary monetary policy, it requires a solid fiscal bridge that supports the restoration of destroyed (or that will be destroyed) balance sheets, as well as the functioning of the credit markets.

The recipe seems to have been understood and well executed in the U.S. FED peers around the world - UK, Europe, Australia, New Zealand and others - have also increased the amount of currency in circulation, avoiding economic agents' balance sheet collapse and, as far as possible, maintaining inflation expectations. We can say that the debasement process discussed in our November Monthly Letter has been accelerated.

# What about the future?

The debasement acceleration process leads us in search for real assets.

The definition of real assets is not very obvious, especially for those who are denominated in Brazilian Reais, a currency that cannot be considered a reserve of value.

We believe that gold, real estate, commodities and companies with the ability to pass on prices fulfill the requirement to be "finite" assets. They are all part of the current portfolio, from a small position in a real estate company in Germany to a relevant exposure to gold and oil. Companies with the capacity to pass on prices and with little, if any, debt are also within this scope.

Another three items are in our radar, although they are still incipient.

- i. an anti-China feeling seems increasing in the population, being stimulated by politicians;
- ii. the "COVID-19 war" showed that the European Union did not fulfill their initial goals. Borders have been closed, aid has been denied and tax incentives are generating great friction (see recent events between Holland and Italy). As in 2011, we saw a European crisis as a result of the 2008 crisis, it seems to us that the European "social and economic agreement" will be discussed again at some point;
- iii. in a recent speech, Boris Johnson called his mandate a "war government", given the need to implement "unprecedented measures since the World War II". In one of them, the British state decided to pay most of the unemployed wages, as much of the world did. In 1940, John Maynard Keynes wrote "How to Pay for the War", which became one of the best debates on finance in war times. Keynes argued: the war efforts and the fiscal deficit had allowed the population to live in full job with high available income in the midst of the conflict. As national production was predominantly

intended for the production of arms, there was a natural restriction on the supply of other products. The strong demand without a supply production would ask for some solutions/suggestions, such as, for example, an income tax of up to 97%. So you could finance the debt and avoid running out of scarce items. Bringing the discussion to our current war, if the goal is achieved and the fiscal expansion supports aggregate demand, could a supply shock be it logistics, production, working capital, etc. disrupt the biggest consensus of all, that the crisis is deflationary? We have already reminded of the disaster of forecasts regarding the effects of monetary expansion in 2009. 10 years ago everything was new and uncertain.

This time, we are sailing in known waters, with enormous fiscal expansion, but that had not been sailed for a long time. We will keep following up.

#### Brazil

Before the COVID-19 crisis spread to the West, we reported in our January Monthly Letter the reduction of positions in companies whose operations are associated with domestic activity, in view of a significant change in the balance of risks and returns.

On one hand, the current repricing of domestic companies has substantially reduced the safety margin. On the other hand, the activity data continuously disappointed the forecasts, motivating negative revisions of the GDP and there was an



increasing perception that Government and Congress did not keep the adequate sense of urgency on the structuring reforms, as for a lack of certainty or for political plots. The economy was sliding and the reformist momentum was winding down.

So we are barely standing still in the current crisis and facing a government that is not very cohesive and organized, that is not even capable of sending a single message on restrictive circulation measures.

We emphasize the importance of the efforts made by the FED, the Government and the American Congress to avoid a credit crisis, quickly putting into practice an expansionist policy and accelerating fiscal expenditure.

Brazil follows a similar pattern in economic policies, however, in addition to its slower pace, the Minister of Economy acknowledged over the weekend that liquidity does not seem - yet - to have reached all sectors and the population. We would never imagine that the government would have difficulties in distributing money to the population, that is the case for the BRL600 aid per person.

A late action is very similar to no action. Another lesson from Bernanke.

We are very concerned that a credit crisis will happen - or has already happened - in Brazil. The government must avoid the usual slowness at all costs. Credit crisis must be avoided, as reacting is much more complicated.

On the positive side, Brazil went through a major deleveraging process during the 2015/2016 crisis and made a series of reforms. Our bases are more solid, our external liabilities does not represent a concern and fiscal measures seem to be really short-term.

The road is long and uncertain, but Brazil and its peers are likely to see other countries get out of the crisis faster.

Once the most severe shutdown period has passed, during which all countries are using every possible fiscal tool, we do not believe that the same compassion to saving lives in the midst of a pandemic will be offered to stimulate the economy of emerging and European countries that have already entered the crisis with deteriorating fiscal conditions. It is likely that these countries lack the capacity to promote the fiscal impulse that developed countries will have and the necessary awareness to prevent the virus spread, making it difficult to escape inertia.

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After a very positive result in the last 2 months, we no longer hold positions on the Brazilian interest curve. In our view, the world's liquidity makes room for further SELIC cuts and even a fall in the long part of the curve.



However, we suspect that the current fiscal expansion will not be followed by the speed of necessary reforms, putting the debt trajectory back on the worst level of risk. In any case, it is not in the Fund characteristic to bet on next COPOM decision.

In the equities part of the portfolio, prioritization period of what we called domestic assets seems to be over, at least considering the macroeconomic trajectory, as described in the January Monthly Letter.

The large, rapid and, to some extent, uniform drop in assets on the stock exchange, (i) in general, made valuations more attractive versus what we saw in December and January, even though there is a long winter ahead; and (ii) for specific companies, created asymmetries and opportunities previously unavailable. We are aware of these opportunities, but remember that it is not common for this fund to invest in equities that do not have a clear macroeconomic bias.

In the currency book, positive results were from the short position in Brazilian Reais, in addition to other emerging currencies, against the dollar. The strong devaluation this year seems to be sustained, especially given the political and economic risks that we have already mentioned. Our trend still is to short the Real.

In the equities portfolio, from a macroeconomic point of view, we are particularly interested in

exporting companies. The exchange rate favors commodities exporters, be it oil, ore, cellulose or agricultural products. These companies produce real assets and were competitive globally at moments of overvalued currency. It does not take a complex exercise to understand the advantage that this great devaluation presents to them.

Above all, we can be ahead of a new economic model, where we will finally be competitive and these companies will be among the winners.

This set of products is responsible for a relevant part of the federal revenue, the job generation chain and, especially, the trade balance. It will not be the companies that will adjust to the exchange rate, but the exchange rate that will adjust to such sectors. As an exercise, with oil priced at 20 dollars, ore at 40 dollars (which seems to be implicit in Vale's valuation) and agricultural products at half the current price, the equilibrium exchange rate would be above R\$ 6.00.

From a microeconomic and fundamentalist point of view, we seek and find competitive companies in almost any crisis scenario that will probably survive the difficult times, whose liquidity positions are favorable, with discounted valuations, pricing their products in a lack of demand environment.

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In Argentina, Mauricio Macri postponed reforms to focus on intermediate elections and extraordinary events beyond his control - the withdrawal of liquidity by the FED in 2018 and the harvest loss (major drought) - have definitely deteriorated the sensitive economic and financial conditions, annihilating his government and his chances of reelection.

We hope that the government's reticence to focus on reforms in 2019, blaming "Risco Chile", is not marked as its big mistake and that the coronavirus crisis is a positive reminder for action instead of a cold shower.

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# Oil

At the end of 2019, we talked about some fundamentals of our long-term position in oil. The difficulties of American shale oil proved to be the main source of attention, in our analysis.

The productivity of the wells - which had grown in previous years with the implementation of new technologies - showed depletion and decline, raising the costs of production and replacement of reserves. In parallel, the migration of production to naturally more productive wells, the high grading, which contributes to productivity gains, was close to its peak and a reversal was likely in the following years.

Due to the high depletion characteristic of production - more than half of the reservoir is depleted in the first 2 years of production <sup>2</sup>- the capex for exploration and development of new reserves is a permanent expense line, making constant the need for fundraising and the development and production cycle highly dependent on short-term prices.

Not surprisingly, the rise of shale oil was closely linked to the plentiful supply of capital - equity and debt - at attractive rates. For this reason, there is even an economic trend that states that zero interest rates were deflationary in the USA.

The contraction of equity issuances in recent years, which went from a few tens of billions of dollars a year to practically none at the end of the decade, was the first sign to reveal the gradual reduction of the economic game prices of the time.<sup>3</sup> The issues would also be reflected in the difficulty to roll over a large amount of high-cost debt: more than US\$ 130 billion between repayments and interest maturing in the 2020-26 period, according to Rystad Energy.

Even with difficulties pilling up, production estimates grewth in the shale basins. Since 2019, it seemed to us that many companies would have solvency problems, even briefly, in the event of stress in the

 $<sup>^2</sup>$  Implicit production depletion of 50 to 70% in the first year  $^3$ WTI between 2015 and 2019 were quoted between US\$40 and US\$60 per barrel 70% of the days .



oil market.<sup>4</sup> Production growth was an even more distant and unlikely event, despite optimistic forecasts.

As an example, according to the EIA, a reduction of only 40% in companies' capex would cause a drop of 250kbbl/day every month in the production of American shale. It represents almost 3 million barrels a day less in one year. We will still see a certain asymmetry in medium/long term in the balance oil prices even if there was placement of spare capacity from cartel.

#### 2020 and the double shock

In 2020, coronavirus crisis took the patient to the hospital and the "dispute" between Arabia Saudita and Russia cut the oxygen supply.

We see the Arab movement as a business and political decision.

Between 2015 and 2016, OPEC tried, for the first time, to take the American shale off the market.

Low cost of capital, adoption of technologies that had raised the productivity of the wells, high grading and the strong demand of the refineries - that saw the margins of refining at its highs and had kept the purchases -, had kept the production steady.

<sup>4</sup>The companies keep *hedging* contracts, with *future sale* and three-way collars of part of the production. The latter, quite common for reducing the cost of the structure, does not fully protect the revenue from *commodity* prices fall, exposing the producer to *stress* scenarios like the current one.

The drop in demand caused by the global lockdown was seen by the cartel as an opportunity for another try.

The shot would also hit an adversary in another battlefield. The dispute between Saudi Arabia and Iran marked the recent Middle East geopolitics. The abrupt drop in oil prices directly affects Iranian revenue - a reduction around 80%.

The combination of increased production and reduced demand generates an excess supply that would exceed 20 Mmbbl/day (possibly reaching 30 Mmbbl/day).

It is with this short-term scenario that important questions about the medium and long term are imposed.

## Will storages in excess affect long-term prices?

The first conclusion is that storages will make the market unbalance last exactly for some time after the normalization of the demand.

However, the consolidation of this scenario does not consider (i) that the physical limits for storage are obviously finite and distributed between the up, mid and downstream, and (ii) the reaction of the supply.

The demand shock brought down consumption of oil products and squeezed refining margins.



The reaction of the refineries has been not to buy any additional oil as at the minimum price agreed, preventing extraordinary costs of storage. Thus, the responsibility for storage goes to the producers, where it is much more limited.

Our expectation is that storages will not be filled up evenly, requiring production cuts before a global tank top, generating an expressive and rare differentiation between different types of oil. Therefore, the storage would be smaller, as well as its consequences on prices.

## At what price would production be reduced?

Before this year's double shock and the collapse in prices, we estimated that part of global production - mainly American shale oil - was not sustainable in the medium term with oil prices close to US\$50 a barrel. In the last quarter of the year, oil was above that level, yet there was a sharp drop in equities, debt and, in the aggregate, cash consumption by companies.

"I previously commented that thinking one was making money at \$50 per barrel was dreaming and public company accounting. However, it did not and does not work. At \$40 per barrel, you're in the hole; at \$30, it is hard to even keep producing existing wells. Nothing can be drilled at \$30 per barrel. If Russia and Saudi Arabia hold the line for nine months to a year, they can reassess and then sell oil for \$80 per barrel with no competition from the United States shale."

Dallas Fed Energy Survey 1T20

Scott Sheffield (CEO Pioneer Resources) in an interview for CNBC, 03/26/2020

"We've asked POTUS to put significant pressure on Saudi to stop this price war. [...] If we don't, we're going to be importing 60% of our crude again from the Middle East. [...]

That's why Pioneer and several independents are seeking a global settlement, to really reduce productions with all States, OPEC, OPEC+ until the virus has ended. [...]

We've run into opposition from Exxon [...], they prefer all of the independents go bankrupt and they can pick up the scraps. We have other companies like Marathon and Ovintiv who are opposed to it because they're so financially stressed they cannot even cut production because they'll go bankrupt. [...]

There's about 74 public independents. There's only going to be about 10 left at the end of 2021 that have decent balance sheets. The rest will become ghosts or zombies. Consolidation won't happen because too many companies will have too much debt."



In a recent survey with more than 100 American E&P and oil field services companies, the Dallas Fed reported that 40% are not creditworthy with WTI prices<sup>5</sup> at US\$ 40/barrel and that new wells would only be economically viable at around US\$ 45-50/barrel (more than 30% above the current price).

Our studies, which consider the costs of extraction, exploration and development, as well as the costs of equity and debt,<sup>6</sup> require a price per barrel of WTI in excess of US\$ 70/barrel for players who are less efficient operationally and financially.

Therefore there is no doubt that the short duration of shale and the current price of oil form an explosive combination. American high yield energy spreads are at levels higher than in 2016. At the end of March, more than 95% of Bank of America's High Yield Energy ETF issuers traded at stress levels (OAS greater than 1,000 bps). The ability to access capital equity or debt - has deteriorated.

The continued need for capex to maintain production levels poses an even higher risk of starvation.

It does not support American producers, but with cost around US\$ 30 per barrel, they are not alone: almost all producers today have their heads below the waterline.

As an example, Canadian oil (WCS) is traded at the date of this letter at \$ 4.65 per barrel. Adding the logistics costs, some salespeople are likely to have a loss in this trading.

In the Middle East, where the marginal production cost is low and is at the bottom of the curve, countries face difficulties with their fiscal budgets. The region is a powder keg and the lack of money can be an undesired sparkle (or desired...).

# When and how much of the production would be resumed?

It is natural that the price recovery will bring back part of the offer that will presumably be suspended.

More selective capital and higher cost globally. Feasibility of investments to resume production in mature wells such as the American stripper wells. Geological factors, such as the damage to Canadian *oil* sands reservoirs. These are just some of the challenges that will be imposed on the resumption of part of production. Topic for future discussion, US\$ 30-40 per barrel above the current price.

Companies that decide to keep producing, it is difficult to imagine that there will be no investment impact.

<sup>&</sup>lt;sup>5</sup>Oil has two main benchmarks: Brent and WTI. In times of stress, prices differ due to location, storage capacity, quality and productivity. Oil produced around the world is usually traded for premiums and discounts around the benchmarks.

<sup>&</sup>lt;sup>6</sup>Estimated cost of capital at 10% in dollars.



On this point, it is worth noting that (i) offshore production has a development period of approximately 4 years. The last 3 years have been of low investment in the segment and should remain so; and (ii) shale production, as already mentioned, without new investments declines between 50-70% in the first year. The supply is unlikely to remain stable in the coming years.

It is possible to imagine a recovery in demand where there is no supply capacity. In our November Monthly Letter in our optimistic scenario for oil, we estimated that the growth of American production would be 400 kbbl/d, yet we predicted a lack of supply. Still for comparison purposes, the extra production capacity in the world was, at the end of the year, 2.5 Mmbbl/d, and just last week, American production dropped 600 kbbl/d.

"Paradoxically, this will ultimately create an inflationary oil supply shock of historic proportions because so much oil production will be forced to shut in."

Goldman Sachs, March 30

The winners will be those who manage to survive the desert crossing, maintaining low costs and positive margins in an environment of pressured prices.

Saudi Arabia and Russia, the usual suspects, will be there and Brazil too.

#### **Petrobras**

The investment in Petrobras is in line with the medium/long-term scenario for oil, with a shift in the curve to accommodate only low-cost players.

The company has liquidity that guarantees room for maneuver in the short term. Disregarding any additional divestment, the need to access the credit market would only occur in 3 or 4 years.

Conservative assumptions of production, volumes of by-products and refining margins point to a breakeven in cash generation pre-amortization of debts, without capex, around US\$ 12-15 per barrel.

Petrobras, unlike many competitors, is a vertical player, which guarantees a captive consumer market. In the midst of the current crisis, it is possible for oil by-products to be sold in Brazil at a premium for some period. First, because this is possible, given that the risk of competition from the import of oil by-products is reduced, given the scarcity of working capital, high price volatility and rising freight costs, due to the strong demand for tanking. Second, a very severe drop in prices would make the life of the already frail ethanol industry even more difficult, something that perhaps is not the government's desire.

Current prices offer an opportunity for exposure to the pre-salt layer, one of the best global plays with upstream scale. Extensive reservoirs, relatively low costs and good realization prices. The increase in the share of the Transfer of Rights volumes in the



company's production mix, with its more profitable tax regime, contributes to a profitable growth in the medium term.

The divestments already made and, in particular, the expected sale of the refineries will substantially reduce the risk of political intervention in the company. The transformation into a net export, in turn, also prevents the recurrence of situations experienced during Dilma Rousseff's term. Although there is price control for by-products, there is no need to import oil and sell it at a loss.

As for currency impacts, it is worth remembering that Petrobras is impacted by oil prices in reais. As already mentioned, the devaluation of the Brazilian exchange rate tends to make local companies more competitive globally.

In terms of time, due to the duration of production and reserves, the company's value should be closer to long-term oil in reais, which, unlike the spot, was much less impacted by the crisis.

Extending the investment period, we expect high returns. In view of the structural supply reduction, the lower the short-term oil, the greater Petrobras' potential in the long run.

We remain at your service.

# **Vista Capital**

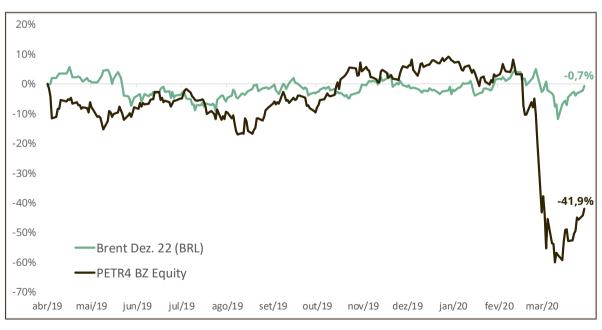


Chart 2: Future of Brent Dec. 22 in Reais x PETR4 - 12m normalized