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Metals & Mining

A deep dive into the Chinese government's upcoming stimulus

LatAm Metals & Mining

Main takeaways on China:

(i) We expose the change in government discourse between the policy of limiting sales and deleveraging the real estate sector, the basic preconditions for the implementation of the "Three Red Lines" in 2020, to a more flexible policy, in what has been called the "Three Green Lines"; **(ii)** Bull trap: We do not believe that the recent bullish movement on stock prices of some Chinese developers after the Sunac case will be sustained, we still have a negative bias towards middle- and high-income private developers; **(iii)** We have updated our projection for an improvement in tax collection and **greater permissibility of deficit vs. GDP**, which should promote a basis for economic stimulus; **(iv)** Understanding the weaknesses of the past: We explain the characteristics of the social housing incentive program launched between 2015-2017 and **how the government is seeking to correct past flaws in order to launch the new program**; **(v)** What will be the effects of the new social housing program in 2024? The repercussions will be positive, but the sector will not rebound with this policy alone; **(vi)** According to our analysis, the **reduction in housing inventories will be ~10%** in the current program vs. 30% in relation to the past model; **(vii)** Will this be enough to solve the problem? No.... But **the program will help close the contraction gap in the sector**; **(viii)** Where will the price of iron ore go then? We have once again updated our curve, with the changes in variables that have emerged over last 3M; **(ix)** We still expect a downward curve, **without sustainability** at the level **of ~US$130/t**. **(x)** However, **we have once again slowed down the rate of decline** vs. previous estimates, which is good news for mining stocks.

In this report we will present a detailed overview of the Chinese government's upcoming stimulus. Among our approaches, we will explain how the **new stimulus for social housing** could help sales in the real estate market over the next few years, how much this will represent in **reducing property inventories** and the **potential increase in China's GDP vs. 2023** performance. In addition, we'll touch on other interesting topics in relation to China that are linked to the demand for steel and, consequently, iron ore, such as: **intensifying expansionary fiscal policy** and improving the **overall financing framework for 2024**, both for the government and for households through more space on the balance sheets of commercial banks.

After touching on these points, we'll go a little deeper into the balance between demand and supply of the commodity, in our classic chapter: **"So where is price of iron ore heading?"**, updating our curve once again, following the most recent variables that have emerged in the last 3M.

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Companies

VALE US Equity
Buy
Price: US$14.71 (05-Dec-2023)
Target Price 12M: US$16.75 (NYSE)

VALE3 BZ Equity
Target Price 12M: R$82.50 (B3)

CMIN3 BZ Equity
Buy
Price: R$6.98 (05-Dec-2023)
Target Price 12M: R$7.60

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What's new?

Finally economic stimulus? Being objective: Yes... For a good part of the year, the government followed a slightly different path, as we anticipated in our reports. The way in which the government had been trying to stimulate the economy until then was basically by reducing compulsory rates and cutting interest rates. In our opinion, the cuts were even mild, given the low (and sometimes negative) inflation, the slowdown in household consumption and the possibility of more aggressive cuts. After a few months, with many economists revising China's macroeconomic projections downwards, other measures emerged to facilitate access to credit and speed up the process for first home buyers. But both initiatives are not comparable to the extensive billion-dollar packages that the government was providing even before the Covid-19 pandemic.

However, in our last sector report on the real estate market, published in September and attached below (Metals & Mining: An x-ray of the exposed fracture in China's real estate market), we commented that we were optimistic about the government's plans to build social housing, with a view to people with lower incomes purchasing property.

China's Ministry of Housing and Urban Development (MOHURD) has unveiled a major expansion of its social housing initiative, proposing to build 3.6 million residential units by the end of 2023, a significant increase on the target of 2.4 million set for 2022. This initiative is equivalent to 1/5 of all housing by floor area. Considering that social housing tends to be of a lower standard and therefore has less square footage per floor area compared to medium and high-end commercial housing, the amount of housing proposed in MOHURD's 2023 project is substantial enough to consume 1/5 of the total floor area of housing space currently being developed in China.

Now, we are confirming that the Chinese government is close to launching a construction stimulus program to further boost public housing targeting this category (social housing). Although the size of this stimulus is probably only 1/3 of the similar program that took place between 2015-2017 considering the allocation of public funds, it will still be enough to set a floor for real estate construction activity next year. This could reduce the exposure of commercial banks to non-performing loans, which are occurring in the bonds of private developers.

That said, we don't see the new program as a potential game-changer for financing real estate developers, since it is limited to China's 35 largest cities, as we will explore below. It therefore doesn't solve the issue for smaller cities.

The tightrope between red and green lines. On July 21, the Chinese government deliberated on the need for more stimulus for real estate construction by revitalizing and expanding investment in communities. The proposal was approved by the Politburo on July 24, as we mentioned in our previous report. From then on, a series of measures were introduced in the provinces and cities, coordinated by the central government, to relax previous rules.

These relaxations were intended to increase the appetite for buying property. In fact, it's worth remembering that some of the measures that became part of the relaxation discourse went against the Three Red Lines, a guideline in force since 2020.

This slightly less hardened tone regarding the famous phrase "houses are for living in, not for speculation" was aimed at supporting the restructuring of developers' debt, with the aim of creating a positive correlation with financial institutions. Our perception is that if the government signaled that it was going to help the sector, the banks would be more flexible in talking about the growing defaults experienced in the real estate portfolio and in the bonds issued by the developers, which could prevent the process of these bonds losing market value from continuing. The recent restructuring of Sunac's debt (Top 5 among the largest medium and high-end developers) is being seen as an example of this change.

The difference between the support for Sunac and other private developers lies in the injection of state-sponsored liquidity to help with debt restructuring. The People's Bank of China (PBoC) has suggested a new banking mandate, the "Three Green Lines", to replace the old "Three Red Lines" and introduce unsecured loans. However, our analysis suggests that this alone should not be enough to restore cash flows for developers focused on small and medium-sized cities.

Bull trap. As we have highlighted in past reports, the central problem seems to us to be the oversupply of real estate in small and medium-sized cities. The reduction in the availability of credit for the sector is a consequence of the crisis, not the reason for it. So, aligning the interests of regulators, banks and developers still seems challenging.

For us, the excess supply vs. the reversal of the age pyramid is a structural problem. We have demonstrated this in past opportunities: middle-class families in ex-Tier I cities seem to have no interest in buying more property, considering that the cost of living has risen, and they already own more apartments than there are children to inherit them. As these families find it difficult to rent or resell their properties, these assets weigh heavily on their budgets, considering that ~70% of the average Chinese person's assets are invested in the real estate market. As a result, launches of new housing projects by private developers have begun to fall sharply.

With less cash flowing into developers, banks were no longer motivated to lend to these companies due to collateral issues and the high-risk nature of mortgages. So, it wasn't a lack of credit that took the oxygen out of the sector. The reduction in the credit supply was a consequence of the oversupply of property. As a result, developers have been encouraged to default, waiting for a bailout from the state, resulting in a freeze on bank lending and feeding back into a decline in house buying attempts.

The responsibility falls on the PBoC to compensate the banks using unconventional policy measures, such as asset purchases, support for social housing and liquidity injections for debt restructuring. The PBoC's willingness to cover part of the commercial banks' exposure to developers' credit risk has not yet been officially signaled, but it has already been considered. This would potentially be the greenest signal the government could give to developers, introducing the last step of moral hazard.

In other words, according to our thesis, which has already been discussed in previous publications, the more interventionist the government is in terms of bailing out the sector with capital injections to alleviate liquidity problems, the more it will end up signaling that developers are free to take risks and not suffer the consequences. The PBoC covering defaults on commercial banks' real estate loan portfolios with its own resources would be a very clear step towards the appreciation of developers' shares in the short term, but one that would throw them into the abyss in the medium term.

Debt restructuring: Use sparingly. Sunac recently successfully restructured its onshore and offshore debt, marking a significant achievement for policymakers in China. The company received court approval in Hong Kong at the end of October to restructure around US$10bn of its debt, making it the first case such resolution among struggling Chinese real estate companies. This plan began to be structured after the default on the interest on an offshore bond in May 2022. Sunac will now issue new notes and convertible bonds to its creditors as part of the debt resolution plan. This is the first time a local government has helped a private developer negotiate debt write-offs, asset sales and share exchanges with onshore banks, municipalities, funds and bond holders. In addition, for the first time as well, the controller shareholder of a real estate developer gave his personal assets as collateral.

This precedent led regulators to demand a similar debt restructuring for all developers. We believe the case shows that this restructuring approach can prevent default on the open market, but does not guarantee that private developers will continue to operate after the process.

We believe that more debt renegotiations will emerge. Next, the regulatory authorities will determine the following: **(i)** all developers must submit to debt reorganization; **(ii)** the local governments where developers' headquarters are located must mainly oversee the facilitation of debt reorganization in collaboration with banks, municipalities, funds and debenture holders; **(iii)** the owners, shareholders and bond investors of private developers must bear the burden of losses arising from debt reorganization through debt and equity swaps; and **(iv)** a lead bank will be appointed to assist in the coordination of debt reorganization.

There is no doubt that debt renegotiation will become an important ally in restoring the sector's credibility. However, the criteria for this assignment will have to be stricter. If the government becomes too flexible on these points, the already commented feeling of impunity in relation to risk-taking will be the only result. What we are trying to say is: recourse is important, and the Sunac case represents a significant milestone, but debt restructuring cannot be trivialized and assigned in very flexible formats.

Developers must somehow feel the consequences of high leverage and oversupply of real estate for the sector to become healthy again. In our opinion, what the government must do is "take the patient out of ICU" and raise awareness. Developers must undergo severe changes in their habits if they are not to return there again. Drawing a parallel, wanting the sector to recover and not relapse again without a change in the leverage habits of developers and how the state promotes interventions is the same as a smoker who discovers lung cancer late in life, undergoes chemotherapy and continues to smoke. Without behavioral changes, there will be no long-term progress.

Timeline indicates intervention package is not speculation. Just four days after the July approval of the government's intervention in the real estate situation, Vice-Premier He Lifeng was appointed to lead the initiative, holding an inaugural national conference with authorities from the cities that would be included in the program. At the time, the government's idea was to release the package to China's 21 largest cities (Tier I + surrounding cities). On August 25, Premier Li Qiang provided policy guidance with the issuance of Document No. 14, elucidating the concept of social housing and possible funding routes.

At the beginning of September, He Lifeng organized the second national conference to deliberate on the details of the program, this time with authorities from China's 35 largest cities. As the plan was initially to be developed for 21 pre-selected cities, it was then expanded to include more cities, including municipalities with a population of more than 3 million. Following this event, the Ministry of Finance (MoF) announced tax exemptions for land use, construction and purchases linked to low-income housing. This was an important step to sow the seeds of stimulus, considering that the revenue structure would come in other forms (more on this later).

On October 31, the Chinese Communist Party's Central Finance Conference identified three priority fronts in the strategy to stabilize the real estate market. These are: **(i)** building affordable housing, **(ii)** revitalizing communities, as well as **(iii)** setting up shelters and facilitating public structures for use in adverse conditions, such as weather and earthquakes.

Finally, on November 8, PBoC Governor Pan Gongsheng declared the bank's intention to provide stable and affordable long-term financing for the construction of low-income housing, in a bid to accelerate China's real estate reform.

An environment of improved tax collection and greater deficit permissibility should provide a basis for incentives. The truth is that we don't consider this new government program, which aims to encourage social housing, to be revolutionary enough to work on its own as a less bitter medicine for the financial health of the real estate sector. However, we are seeing other signs that would help lay the foundations for this stimulus from a fiscal point of view and perhaps others that could be studied in 2024. And this is an attractive novelty compared to the scenario we were drawing up at the beginning of 2023.

Tax collection and budget activity accelerated in October on the basis of the latest credit data, offsetting the fall in household demand for loans. We expect a fiscal advance in the first quarter of next year, as funds from the additional ¥1 trillion (~US$140bn) in special CGBs (Chinese treasury bonds) and local governments also

start issuing special criteria debt soon after January 1st. In 2Q24, we believe the bonds could create a ~15% y/y expansion in tax revenues.

To a certain extent, the high issuance of treasury bonds has made it difficult for households and companies to increase their financing. Demand for credit from these sectors remains weak in the short term, but our view is that once commercial banks have fulfilled their obligations to buy public debt, they will have more funding available for other forms of lending. In other words, the CGBs have been issued and the banks have an obligation to buy them, taking up space on the balance sheet with treasury bills. As these securities are passed on to investors, commercial banks will start to open up more space on their balance sheets and then start to increase their credit originations once again.

This factor, combined with lower interest rates, should bring a greater flow of purchases of consumer durables and capital goods, boosting industrial steel consumption in 2024 and 2025. It is therefore likely that we will see the industrial PMI recover next year.

In addition, at the end of October, China's government loosened the fiscal deficit limit to 3.8% of GDP (vs. 3% previously), giving more leeway for spending. The budget amendment suggests that China may be adopting a more adaptable attitude towards fiscal policy. It is unusual for China to amend the budget on dates other than its annual parliamentary meeting in March, having only done so on occasions such as 2008, after the Sichuan earthquake, and after the Asian financial crisis in the late 90s.

According to historical data, the deficit rate, relaxed to 3.8% of GDP, is now at its highest since the revision of the distribution of taxes between the central and provincial governments, implemented in 1994. In other words, in the last two decades, there has never been such a high level of permissibility for government spending vis-à-vis GDP as there is now. Of course, it's worth noting that, considering this period of the last decade until the Covid-19 pandemic, China was growing its GDP by 7-10% every year, and today it runs the risk of failing to meet the 5% target in 2023.

So, although the proportion of fiscal deficit has increased, GDP has shrunk. In this logic, the nominal amount of fiscal revenue for 2023 and 2024 should still be lower compared to past cycles of stimulus packages, even with this relaxation in spending.

The social housing incentive program and greater fiscal space should promote an improvement in the steel industry and, consequently, in demand for iron ore. We believe that the **(i)** fiscal impulse of 1H24, the continuation of **(ii)** heavy investment in energy, transport and infrastructure, as well as the **(iii)** affordable housing program will continue to support the replenishment of finished goods inventories in the manufacturing industry. We believe this is consistent with an inflection point for the RMB/USD exchange rate, and acting as a fundamental plank for mining stocks by keeping the price of 62% Fe iron ore at higher levels (above US$110/t).

Economic stimulus: Old vs. New

To better understand the new incentive program, we first need to clarify: What is an LGFV? First of all, it's important to explain what a Local Government Financing Vehicle (LGFV) is. LGFVs are a method used by local governments in China to secure forms of financing. Given the ban on local governments in China directly issuing municipal bonds, LGFVs offer a way to obtain the financing needed for economic development.

Generally structured as an investment-only special purpose vehicle, an LGFV raises capital to finance ventures such as real estate and infrastructure projects by municipalities and provinces. The funds can be obtained through bank loans or the issuance of municipal investment notes, and subsequently encapsulated in bonds and sold as structured products to investors in commercial banks. However, these structures often struggle to generate enough receivables to pay their obligations to investors, requiring local governments to raise even more funds to pay off their debts.

Understanding the weaknesses of the past: Program launched between 2015-2017. Although the central government's current strategy has some parallels with the one used in 2015-17, it also differs significantly on other points. We'll cover the differences later. From the point of view of similarities, LGFVs will still remain the main link between financial institutions and beneficiary households, just as they were previously.

During the past stimulus program, in which communities around large cities were financed and transformed from 2015 to 2017, the People's Bank of China (PBoC) initially granted PSL loans to policy-focused banks. Priority sector lending (PSL) is a practice whereby certain sectors of the economy receive financial assistance in situations where they might not otherwise have access to sufficient credit in a timely manner.

It is a function that the PBoC has assigned to commercial banks to ensure that a certain percentage of bank loans go to specific sectors, including agriculture and related areas, small and micro-enterprises, education, social housing programs and other strategic groups for the low-income population. In parallel with Brazil, it resembles BNDES credit lines for certain sectors, where a commercial bank becomes the intermediary agent between the credit and the borrower. In the past program, after the PBoC opened PSL credit lines for commercial banks, the next step was to channel these loans to LGFVs. LGFVs then used these funds as capital and further increased their leverage by taking out new loans from traditional banks and trust companies.

When it came to distribution, i.e. getting the funds to the beneficiary families at the end, the LGFVs provided cash or a housing voucher to residents who had registered and received the right to participate in the program. Those who chose the cash option had complete freedom to spend it on the properties they wanted, but received a smaller amount than if they had chosen the housing voucher.

When they opted for the voucher, they would be obliged to use it to buy an apartment in pre-selected projects, enabled in the government system (which, at the time, could or could not be from private developers), before the end of the period, between 3 and 6 months. Once the decision had been made, they would hand over the voucher to the real estate developers in charge of the selected project, who would then request the disbursement of the funds, withdrawing the specific amount from the LGFVs. Essentially, the idea behind the program implemented in 2015-17 was a kind of Helicopter Money.

Helicopter Money is a non-traditional monetary policy proposal, generally recommended when the economy remains in recession even with interest rates close to zero. The initial concept of Helicopter Money implies direct payments from central banks to individuals. The term has been used by economists to cover various proposals, such as the "permanent" monetization of budget deficits. Again, in the parallel with Brazil and the US, a classic Helicopter Money policy was the Emergency Aid, distributed during the Covid-19 pandemic until the end of 2022.

It is worth mentioning that China was not experiencing this type of scenario in 2015-17. In other words, the country's situation in those years was not characterized by recession, unlike the situation experienced during the pandemic. Between 2021 and 2022, the Central Banks of the global economies ended up injecting money through aid, and interest rates were cut drastically (in Brazil, the SELIC was at its lowest level on record), as economic activity levels fell due to the mobility restricting policies.

Our perception is that a Helicopter Money policy was perhaps too far-reaching an approach for an economy that was growing at ~7% GDP, both during the stimulus exercise and even before the policy was implemented.

The criticism of the previous program is not just ours, the government itself admits that it made a mistake. In Document No. 14, Chinese regulators openly expressed their criticism of the approach taken in the previous stimulus program. This is in line with our opinion, issued in the past sector report on this subject (Metals & Mining: An x-ray of the exposed fracture in the Chinese real estate market).

In this report, published in September and attached above, we were already arguing that heavy government stimulus packages aimed at easing the liquidity difficulties of private developers and carried out in the same way as they were conceived in the past, would convey a negative indication from a fundamentalist approach, despite being a move widely expected by a portion of investors who still have a addictive view on how big package of stimulus is always the answer.

Our criticism, through the same stimulus mechanisms, is related to the strengthening of the notion that developers can persist in taking risks in leverage, that the state will rescue them whenever they have cash flow dysfunctions. The so-called "moral hazard" effect. On the other hand, it is also important to note that the government's incentive policies seen during much of 2023 have been rather mild, compared to the historical behavior observed during the decade before the pandemic. In principle, the government recognizes that in order to try to help the sector, it will have to build up different stimulus policies from now.

What are the main differences? As we quoted throughout the report, the new policy being devised for the social housing program has different characteristics from the old incentive that was adopted from 2015 to 2017. These differences include:

(i) The funds withdrawn must be used exclusively by the designated LGFVs; **(ii)** cash distributions are completely prohibited, leaving only the option of housing vouchers; **(iii)** LGFVs are free to use the funds in two ways - first, to buy existing commercial properties and convert them into public rentals, and second, to build new public housing by improving communities. In both cases, it is forbidden to trade the underlying apartments on the secondary market.

Our interpretation is that the modifications address important weaknesses in the previous program. Bearing in mind that a considerable portion of the beneficiaries chose to withdraw the money, and only a smaller portion opted for the vouchers, the program actually had loopholes for use by people who aimed to acquire real estate as a form of investment rather than to live in.

The 2015-17 program ended up shooting itself in the foot. By opting to receive cash instead of a voucher, the choice of purchasing the development was free. In this way, the beneficiary could choose any apartment from a private developer, even of medium or high standard, by complementing the purchase with their own funds, and even potentially resell it.

By prohibiting cash withdrawals, and leaving only the housing voucher option, the program ends up forcing beneficiaries to select only projects that the government itself has already approved to be on the list, which makes it easier to control even the project profile, ensuring that the use is indeed for low income. In addition, by prohibiting the possibility of trading apartments that have been part of the program, the government also eliminates the act of subsequent resale. We believe this should prevent beneficiaries from flipping the housing on the secondary market and making the apartment part of the commercial housing system, speculating on real estate appreciation.

Both the option of **(i)** receiving the money in cash instead of the voucher, and **(ii)** the possibility of reselling the property, form the main points that, in our view, made the previous program ended up contributing to real estate speculation even though it was called social housing. We therefore believe that the old program facilitated the mortgage prices to go up and in fact made it even more difficult for low-income people to afford an apartment in a big city. However, by eliminating these two possibilities, the government is correcting the old deficiencies and pointing the next stimulus package in the right direction.

What will be the effects of the new social housing program in 2024? Our preliminary view is that the new social housing program will subsequently result in: **(i)** families not experiencing any abrupt income shock and therefore no intense stimulus to consumer behavior in the short term, but a long-term increase in disposable income due to reduced expenditure on housing and rent; **(ii)** an increase in the pace of reduction in commercial property vacancy, much like the phase in 2016-2017, and **(iii)** the start of sustained growth in property construction and new builds.

The repercussions will be positive, but the sector will not get back on its feet with this policy alone. The 35 urban centers covered by this program represent almost 30% of the total population, ~25% of the national construction and real estate sales activity per square meter and ~50% of the national real estate sales revenue. Unlike the previously funded transformation phase, which included a large part of the smaller cities, the magnitude of this new public housing construction impulse will only correspond to around 30% of the previous phase.

Consequently, its effects on growth, household wealth and asset valuations will be considerably reduced. This is in line with what we've been saying all year. To get the sector back on its feet, a change in attitude is needed from everyone in the chain: the government, banks and developers. We don't take kindly to repeating the past. Incentive packages that seek to correct inappropriate approaches that were taken previously, as well as stimuli with a less excessive bias, show exactly the right way forward.

The reduction in property inventories will be ~10%. In terms of inventory reduction, PSL loans worth ¥3 trillion (~US$420bn) disbursed from 2016 to 2018 led to a ~30% reduction in housing inventories. Similarly, the current program is being designed for a total PSL of ¥1 trillion (~US$140bn), so we expect a significantly lower inventory reduction than the previous program. Still, as the current program will be leveraged by bank loans and local government bonds, our initial estimates are that the package will see a collective extension boosted to ¥4 trillion (~US$560bn) between 4 and 5 years.

Despite the extensive effect of bank loans and bond issuance by LGFVs, totaling an amount greater than the PSL loans of the past program, our preliminary calculation is that the new phase will only be able to reduce inventories of finished properties by ~10% Genial Est. This is mainly because the level of current inventories is much higher now than it was 8 years ago, when the old program was conceived.

Because of this, we predict that the impact of the new stimulus, when it comes to easing the cash flow burden on real estate developers, especially private ones, through inventory purchased by LGFVs, will have a much lower impact than that seen between 2016 and 2018.

Will that be enough to solve the problem? No... The developers with the greatest cash flow difficulties are generally located in smaller cities, which will not qualify for this program. We've already mentioned this in this report, as well as in others we've published previously. The crux of the matter is in small and medium-sized cities, not in the largest cities.

Of course, expanding to 35 cities vs. 21 previously is a positive demonstration. Even so, it won't be enough to revive the real estate system. Not least because, although social housing is indeed seen by us as the healthiest way for the government to invest today to help the sector, we believe that medium and high-end private developers will continue to experience difficulties. The alternative for them is to renegotiate their debts, through the precedent set by Sunac.

We therefore remain firm in our position that only an improvement in sales coupled with a debt restructuring, boosting consumer confidence, will pave the way for the salvation of most private developers. And that will take some time to happen.

But the program will help close the contraction gap in the sector. Even if it doesn't solve the entire sector's difficulties, we believe that the new social housing incentive program is an important step forward on the part of the government, which seems to be designing a policy by learning from past mistakes. In our assessment, the most obvious result of the program will be the growth in units sold, the construction of properties and the stabilization of costs, especially in large urban centers. We project that the ¥1 trillion (~US$140bn) package could potentially upgrade the real estate investment by around 8% to 9%, reducing the contraction in from the current -9% to around 0% by 2025.

It is still uncertain how this increase in Tier I cities will be offset by the falls in smaller cities, which are likely to continue for some time. Generally speaking, this could facilitate an annual growth of 6% to 7% in new construction and 0.3% to 0.5% in nominal GDP growth per year until 2026. Which, given the government's difficulty in reaching the current target of 5%, seems like good news to us.

So where is price of iron ore heading?

In this chapter, we'll evaluate some aspects of demand and supply and address the explanations for the resilience of iron ore prices. From our last sector report on mining to this one, the price of the 62% Fe benchmark has risen to ~US$130/t vs. (~US$120/t at the end of September) and is now ~35% above the average of the last 10 years. After listing some **(i)** demand and **(ii)** supply factors, we'll present our updated projection for the iron ore price curve for the next few years.

Demand

From the point of view of demand, there have been no significant changes in relation to the short-term fundamentals we mentioned at the end of September in our previous publication. However, it is clear that this movement in the appreciation of iron ore between September and the beginning of December is also correlated with the economic stimulus we have commented on throughout this report. Even so, the difference between this report and the previous one is only in **(i)** the details of the stimulus for social housing, **(ii)** the loosening of fiscal space for spending, and **(iii)** government financing.

Therefore, we can conclude that the appreciation seen recently has also carried a speculative bias in relation to the effects of the stimulus policy, preceding the implementation itself, as well as the increase in fiscal space. In our opinion, this is a normal movement for most commodities. The market reacts quickly to prices, trying to anticipate the effects of certain changes in supply or demand conditions, even before these variables have their own materialized repercussions on the real economy.

Another reason that explains the acceleration of the price curve in relation to this disparity between speculation and the real economy is the success of the restructuring with Sunac's onshore and offshore debt creditors at the end of November, after the plan was approved in October by the Hong Kong authorities. As the conditions under which this approval took place constitute a historic milestone, market sentiment has turned to optimism that this event will be repeated for other developers who are facing insolvency problems, such as Country Garden.

Of course, this in itself has also helped the price of iron ore to gain momentum, as it presupposes an increase in steel demand through a potential recovery in the sector.

However, even in the face of this important news, the fact is that none of this has yet translated into an increase in demand for steel in the short term. We are still seeing industrial PMI readings in a contraction zone (below 50pts) and sales of new homes in the commercial market, through private developers, well below the historical average over the last 3M (~35% below the average of the last 10 years).

What is sustaining demand if the difficulties in the real estate market persist? Despite the difficult conditions for Chinese demand in the commercial real estate market, we saw an average of US$114/t for the 62% Fe benchmark throughout 3Q23, an increase of +2.7% q/q. The iron ore price continued to rise, especially in November, reaching ~US$130/t in early December, setting the pace for a +14% q/q increase. We believe that this led to an improvement in the price mix that positively impacted Vale's and CMIN's performance in 3Q23 and is pointing to an exceptionally solid 4Q23 for both companies, their particularities aside.

In our estimation, this advantageous change in iron ore prices was driven by several facets. Among them, the main ones are: **(i)** Infrastructure-related construction which is witnessing intense demand for steel in China; **(ii)** growth in the development of social housing financed by the Chinese government, by the MOHURD master plan, as we have already explored since the last report, and we have further detailed in this publication the ¥1 trillion (~US$140bn) stimulus package due to be launched; **(iii)** record performance of the automotive industry in China and **(iv)** increased exports of Chinese crude steel to global markets, including Brazil.

When the effects of the economic stimulus enter the real economy, how much will demand rise? Our thesis on China, from the moment we assume the coverage of the Metals & Mining sector, has a strong correlation with the inversion of the age pyramid. Our estimate of population decline is an important element in understanding what will happen to the country in the future. As we also made clear at the beginning of the report, we do not believe that the ¥1 trillion (~US$140bn) stimulus package for social housing will be enough to reverse the situation in the sector.

However, our initial calculations are that the government's real estate investment will be enough to unlock the ~8.5% advance in sales of all square footage available in China today. This should mitigate the decline in real estate investment, which today stands at -9%, to almost 0% by the year 2025.

Even so, from 2025 to 2028, our current estimates suggest that the sector will not achieve sales area growth rates above 5%. The high level of housing inventories in small and medium-sized towns, coupled with a population that is stopping having children, is an impasse that has yet to be resolved. The viability of cheaper housing is a way of giving more stability to the sector. But demand is unlikely to be anywhere near what it was in the last decade.

Considering the years 2024 to 2028, we project annual steel production in China to be between 950-985Mt (+4.5% vs. previous Genial Est.). In fact, our current estimate shows a more optimistic medium-term scenario compared to what we were projecting at the beginning of the year, when we include the effect of the incentive package on the construction of social housing. However, the new projection still represents a drop of -2.5% compared to the record of 1.05Bt set in 2020.

For 2023, considering that up to October production totaled 875Mt (+1.4% y/y), we opted not to change our estimate. We are maintaining 990Mt Genial Est, as we have projected since the beginning of the year, given that we believe an output of ~115Mt is feasible in the last two months of the year. For 2024, our projection is 985Mt Genial Est., which would indicate a gentle decline of -0.5% y/y.

So even with the incentive, steel demand is likely to fall in 2024? Not really... Our estimate indicates that production should fall slightly in 2024. However, domestic demand has a projected increase of +2.5% y/y, due to the effect on the real economy of the points we mentioned in the report: **(i)** Incentive package for social housing; **(ii)** investments in renewable energy, together with advances in manufacturing sectors related to the energy transition; **(iii)** strong automotive industry, especially for electric vehicles; **(iv)** investments in infrastructure, especially in the rail transportation matrix; **(v)** Improvement in the industrial PMI, getting closer to 52pts 24E (vs. ~48pts 23E).

We believe that one of the consequences will be a reduction in exports. One of the points that has been supporting the high blast furnace rates in China (~92% in September and ~88% currently), even with the industrial PMI in a contraction zone, is the increase in crude steel exports. This situation is also key to understanding our current preference for mining companies (Vale and CMIN) over allocating capital to steel companies under our coverage, such as Gerdau, CSN and Usiminas.

However, 2024 could be a different year regarding this matter. Despite the issues surrounding tariff barriers for imported steel in Brazil, we believe that, with domestic demand improving in China, local steelmakers' margins will rise again and there will be a lower volume exported to global markets compared to what happened in 2023.

It's still too early to say how strong this effect will be, but we believe in this trend for next year, mainly due to two reasons: **(i)** banking constraints, due to the freeing up of space on banks' balance sheets for credit lending. In addition to **(ii)** greater fiscal space for government spending. We believe that these two factors should help the manufacturing sector get back on its feet in 2024 and increase domestic steel consumption.

What is worth exploring that we haven't covered on in this report or others? We think it's important to go a little deeper into two items we mentioned above: **(i)** investments in the rail transportation matrix and **(ii)** expectations of an improvement in the industrial PMI for 2024.

As one of the leading points to drive investment in infrastructure in China, and consequently increase demand for steel, from January to July we saw China Railways investing US$51bn, (+7% y/y). This led to the opening of new railways, the modernization of existing ones and an increase in freight and passenger capacity.

Important developments include the completion of the Lanzhou - Xining line upgrade, which reduced travel time between the cities to less than 1 hour, and the ongoing construction of new lines, such as the Liujiashan tunnel and the Haba Xueshan tunnel. For 2024, we believe this process will continue, with investments at similar levels for the Qingbijiang - Zhenjiangguan lines and the Shanghai - Nanjing - Yanjiang high-speed line.

Regarding the expectation of an improvement in the industrial PMI, it's important to note that the basis of comparison with 2023 will be relatively easier to overcome, considering that it was a year of contraction in the sector (at least up to this point). Our belief is that 2024 will offer greater opportunities for industrial activity to heat up in China through the improvement in the fiscal plan, with a deficit widened to 3.8% of GDP (vs. 3% previously). The government in China has always been a strong driver of industry through expansionary fiscal policy. When the government invests more, it tends to drive greater industrial activity to produce capital goods to support investment, like a vicious cycle.

In addition to the government itself, banks should generate more space on their balance sheets after the obligation to buy CGB bonds ends. With lower interest rates and more room on the banks' balance sheets, lending will be on an upward trend in 2024, both for individuals and companies. This should boost demand for durable goods and industrial expansion projects, which in turn will lead to higher steel consumption and a gradual improvement in the industrial PMI next year. We don't expect anything huge, but a recovery to around 52pts Genial Est, moving out of the contraction zone in which the indicator remained for much of 2023.

In addition, the PMI for the steel sector in Hebei province, in northern China, rose by +5.6bps in November, reaching 50.7pts, ending a decline of three consecutive months. This result was 2.5pts. higher than China's national steel PMI, which was 48.2pts, still in the contraction zone (parallel to the industrial PMI). The new orders sub-index in Hebei reached 50pts, an increase of +7.5bps m/m. New steel export orders in Hebei rose by +9.1bps m/m to 50pts, so we're still seeing a high concentration of exports in the short term.

Supply

Low port inventory levels were the main reason for the voracious rise in prices in November. It is necessary to point out that we have seen inventory levels at the 45 main ports in China at very tight levels compared to the historical average, reaching close to 110Mt in November. This has in fact also contributed, on the supply side, to the recent rise in iron ore prices, in addition to the points about demand that we commented on above.

However, inventories are likely to rise as utilization rates fall. Even at a still tight level, we believe that inventories should rise again due to the drop in demand from steelmakers, since the volume of iron ore accumulated at the ports has risen to around 115Mt, +1.7% more than in the week of November 30. Steel companies may reduce the amount they transport into the mills due to high iron ore prices and pressure from rising coking coal costs, which have again squeezed margins. Since mid-November, Chinese seaborne iron ore prices have remained high, despite warnings from Chinese regulators.

Mild production cuts and scheduled maintenance at some steel mills have slightly reduced demand for iron ore, as the utilization rate of blast furnaces in a list of 247 Chinese steel mills that we follow fell to 87.63%, down -0.33p.p between November 24 and 30. It's worth mentioning that the blast furnace utilization rate was close to 92% in September, in our previous sector publication.

So, despite the rise in iron ore during this period, we believe that demand has cooled slightly, with the supply-side restriction due to the reduced inventories at the ports being one of the main variables in iron ore fundamentals that would have caused the 62% Fe benchmark to rise.

Seasonal falls in steel consumption have also reduced enthusiasm for production. Apparent consumption of rebar has fallen consistently since November, with another drop of -5.5% w/w to 2.52Mt per week between November 27 and December 1. As for HRC, steel production has remained relatively more stable, due to resilient domestic consumption and a greater export bias.

Shipments from Brazil accelerate, but volume drop in Australia offset. The total volume of iron ore shipments from 19 ports and 16 mining companies in Australia and Brazil remained stable at 26.7Mt in the week from November 27 to December 4, with a marginal increase of +0.6% y/y. Despite the total amount being almost flat, there are differences between shipments from both countries.

In Brazil, iron ore shipped from 9 ports increased for the second consecutive week by +1.7Mt, reaching 9.5Mt (+21.7% w/w), considering the seasonal effect of the year-end, with Brazil increasing the supply of iron ore in the seaborne system. In Australia's case, iron ore shipped from 10 domestic ports fell by -1.5Mt, or -8.2% w/w, to 17.2Mt, basically neutralizing the effect of the increase in Brazilian shipments. Among Australia's three largest mining companies, both Rio Tinto and BHP reduced their iron ore shipments to China, while Fortescue Metals Group increased its shipments by +30.4% w/w, to 2.9Mt. Looking ahead to the next few days, maintenance work at Port Hedland in Australia is expected to reduce the country's i.o. shipments by ~215Kt.

We therefore conclude that by the end of 4Q23, even if iron ore from Brazil increases its concentration in China's ports, which is, by the way still well behind Australia's vs. historical average, the reduction in the volume shipped by Australia should offset. So, total amount of volume shipments tends to remain relatively stable.

Speculative position is stable. Chinese port inventory of iron ore held by trading companies increased by 354Kt to 67Mt at the end of November, representing ~60% of the total, according to Mysteel data. If we compare this with our last sector report, published in September, the position at that time was ~61%, basically stable with the current one.

This suggests that the recent price increase, despite still having a speculative bias, has a stronger correlation with the tight inventory levels in China's ports than necessarily with an increase in the position of trading companies. We believe that the acceleration from the level of US$110/t to US$130/t was due to supply restrictions + pricing by trading companies transferring the potential demand due to the positive news on stimulus and increased fiscal space.

Price

Will iron ore prices remain at this level? Although seaborne i.o. prices increased steadily during October and especially November, our analysis suggests that they will decrease due to reduced demand and stricter regulations in China. Throughout November, the price of 62% Fe i.o. remained slightly above US$130/t, despite attempts by China's National Development and Reform Commission and the Dalian Commodity Exchange to slow the rise in prices.

However, from a fundamentals point of view, we believe that iron ore prices may fall in December due to increased market monitoring and the interruption of production at several steel mills for annual maintenance. Blast furnace utilization at the 247 Chinese steel mills we monitor fell for the fifth week in a row, reaching 87.63%, as we have already quoted.

In the short term, as the price of iron ore has risen sharply, we believe that many steel mills are holding off on purchases, waiting for the price to fall so that they can buy more inventories from the ports. As a result, blast furnace activities have slowed down.

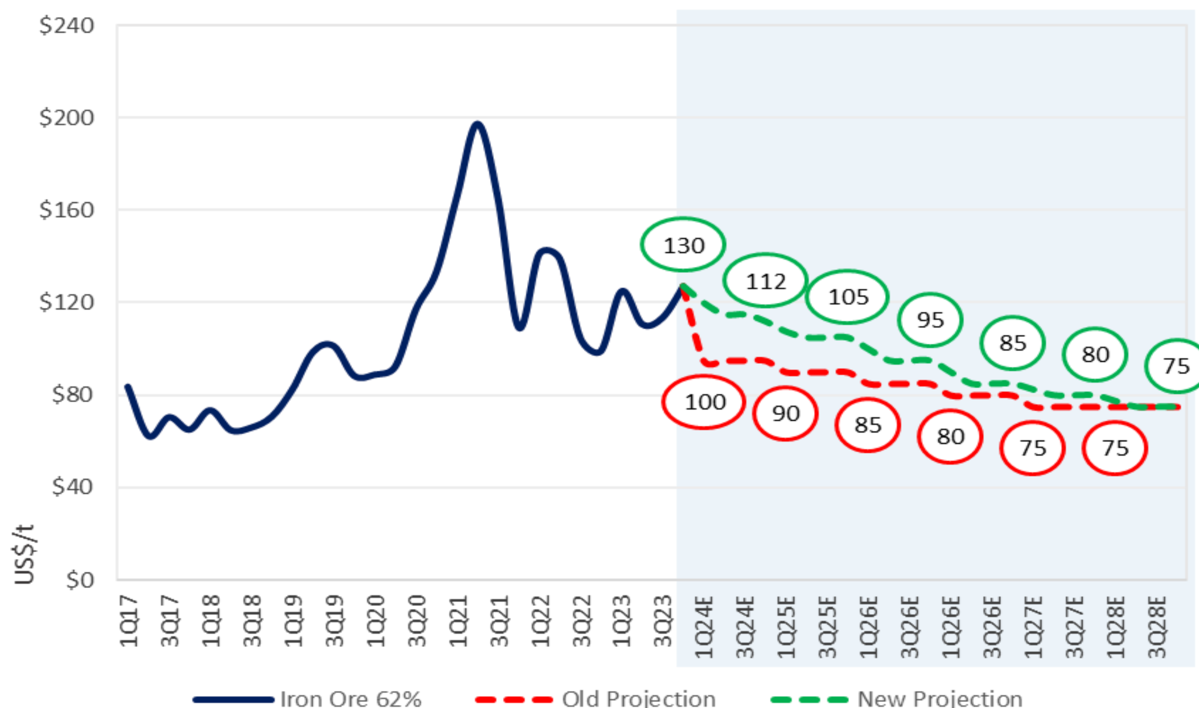
Considering that margins are still under pressure in China due to the high price of metallurgical coke, our analysis is that many steelmakers are avoiding buying iron ore at this price level. If the price of i.o. falls, there will be a slight but important relief for these margins, since they are also being squeezed on the coke side.

How do recent events affect the curve going forward? In our September update, we argued that the real estate would absorb a shrinkage in steel demand of -22% y/y. By measuring that the housing sector accounts for ~35% of China's steel consumption, and considering the 2022 production output, we had found a reduction equivalent to -250Mt in demand for 2023 compared to last year.

Although we haven't changed our demand assumptions for this year, as we believe they are still in line with reality, what has happened is that supply has been squeezed more than we imagined. So, since all the news we brought in this report from the point of view of demand will only have an effect on the real economy from 2024 onwards, there is no need to talk about an increase in demand at the present time that would justify the price of iron ore accelerating so voraciously between our previous review and this one.

Our conclusion is that, as we mentioned above, the situation of appreciation to reach ~US$130/t occurred due to two main reasons: **(i)** supply limitations, with Brazil increasing shipments to Chinese ports, but being offset by a greater than expected reduction in Australian shipments, added to **(ii)** the higher prices practiced by trading companies, which although they have a stable position of ~60% of port inventory (which is not excessive), still have a lot of power to move prices based on speculation of a potential increase in demand due to positive stimulus news (including social housing), increased fiscal space and a possible wave of debt restructuring by developers following the Sunac example.

Graph 1. New Iron ore projection trends downward in a slower pace



Soure: Genial Investimentos, Bloomberg

We still maintain the view that the price at ~US$130/t is too high and that there is currently no demand from the real economy to sustain this level. We therefore believe that the iron ore curve will decelerate in 2024. However, once again, certain supports may prevent the slowdown from being as intense as the previous projection. Although we had already made a milder slowdown in our assumptions in the previous report, published in September, we have recalibrated our model again to incorporate the new realities described in that report for the coming years.

Our projection: Our current analysis suggests that there will be a further easing in the deceleration of values. The 62% Fe benchmark is now estimated at US$127/t for the 4Q23 average (vs. US$100/t previously). Similarly, 2024 now has an average projection of US$115/t (vs. US$95/t previously), starting with a US$120/t average for 1Q24. Meanwhile, the long-term estimate (2028) remains constant at US$75/t.

Even with the problems in the Chinese real estate market and an industrial sector still running out of steam, iron ore prices continue to show more resilience than initially expected, in the face of expectations of government changes and interventions, which is beneficial for the mining sector.

Our Take on Mining

The idea of this report was to provide the latest updates on the macroeconomic situation in China, and to show what the implications of these updates would be for the mining sector. We concluded that with the new assumptions, the updated models for Vale and CMIN would suffer impacts on the 12M Target Price.

Vale

The publication of this report is in line with **Vale Day 2023,** an event we attended in London, UK. During the event, Vale updated its guidance for next year and for the long term. Some of the figures in Vale's update were lower than our current estimates, such as the guidance for iron ore fines production for 2024, which stood at 310-320Mt, completely flat compared to this year's guidance, when our estimate was 329Mt for next year, an increase of +5% y/y.

The C1/t guidance for 2024, a major concern we've seen from investors, came in in line with our projections, at US$21.5-23.0/t (vs. US$22/t Genial Est.), which makes us feel more relieved.

However, even with C1/t stable, fine iron ore production with no growth for 2024 will certainly have a downward impact on our 12M Target Price. It is possible that the new iron ore curve we have updated in this report will offset the potential drop in the Target Price. For now, **we maintain our positive bias for Vale**. We'll update the assumptions shortly and come back with more details on Vale Day 2023. In the meantime, we reinforce our **BUY rating**, with a **12M Target Price** of **R$82.50** for **VALE-B3**, and **US$16.75** for **NYSE ADRs**.

CMIN

In the case of CMIN, our expectation for a historic production record in 3Q23 has been achieved, with the annual guidance being revised upwards for the first time, considering last year's difficulties. The new figure is 42-42.5Mt for 2023. We are optimistic that on CSN / CMIN Day in a couple of days the company will announce further growth for 2024.

The big issue with CMIN is the penetration of third-party iron ore. In our preview report, we commented that our expectation was that in 3Q23 we would see a reduction in third-party purchases and an increase in margin. Before the results, we raised our rating to Buy with an eye on the trigger that would be set off for the share price if we were assertive. All said and done... CMIN's shares have appreciated by +14% in less than 30 days.

Due to the reduction in third-party purchases, as well as an improvement in the realized price, we saw a favorable increase in the EBITDA margin to 40.7%. Despite a slight reduction in cash generation in 3Q23 compared to our expectations, the company's FCF generation was R$779mn in 3Q23 and a more positive movement in the release of working capital is expected by us in 4Q23. We therefore believe that next quarter's cash flow generation will be more robust. With our recent optimism about the stock, we reiterate our **BUY rating**. Given the **new curve assumption for iron ore**, the **12M Target Price** has been **revised upwards** to **R$7.60** (vs. **R$7.20** previously).

Appendix: Vale

Figure 1. Vale – Income Statement in USD Millions (Genial Est. 2023-2028)

Income Statement	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**40.950**	**39.200**	**40.940**	**42.627**	**43.338**	**43.944**
(-) COGS	(22.554)	(23.976)	(25.203)	(26.536)	(27.776)	(28.996)
Gross Profit	**18.396**	**15.225**	**15.737**	**16.091**	**15.562**	**14.948**
(-) Expenses	(3.727)	(4.151)	(3.078)	(3.206)	(2.764)	(2.696)
Adjusted EBITDA	**16.728**	**14.233**	**16.109**	**16.308**	**16.346**	**15.929**
(-) D&A	(3.153)	(3.326)	(3.471)	(3.615)	(3.753)	(3.886)
EBIT	**13.575**	**10.907**	**12.637**	**12.693**	**12.593**	**12.043**
(+/-) Financial Result	(1.854)	(1.659)	(1.633)	(1.559)	(1.697)	(1.509)
(-) Taxes	(2.556)	(1.094)	(1.284)	(1.320)	(1.291)	(1.248)
Net income	**9.165**	**8.154**	**9.721**	**9.815**	**9.605**	**9.286**
Profitability						
Net margin (%)	22,38%	20,80%	23,74%	23,02%	22,16%	21,13%

Figure 2. Vale – Cash Flow in USD Million (Genial Est. 2023-2028)

Cash Flow (FCFF)	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**40.950**	**39.200**	**40.940**	**42.627**	**43.338**	**43.944**
(-) COGS	(22.554)	(23.976)	(25.203)	(26.536)	(27.776)	(28.996)
Adjusted EBITDA	**16.728**	**14.233**	**16.109**	**16.308**	**16.346**	**15.929**
Adjusted EBIT	**13.575**	**10.907**	**12.637**	**12.693**	**12.593**	**12.043**
(-) Taxes	(2.556)	(1.094)	(1.284)	(1.320)	(1.291)	(1.248)
(+) D&A	3.153	3.326	3.471	3.615	3.753	3.886
(+/-) Δ WK	(1.810)	(427)	773	(194)	2	(61)
(-) Capex	(5.928)	(6.137)	(6.288)	(6.341)	(6.364)	(6.384)
FCFF	**6.435**	**6.575**	**9.310**	**8.453**	**8.693**	**8.236**

Appendix: CMIN

Figure 1. CMIN – Income Statement in BRL Millions (Genial Est. 2023-2028)

Income Statement	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**17.983**	**18.205**	**18.056**	**22.303**	**23.067**	**21.140**
(-) Cash COGS	(8.658)	(9.291)	(9.610)	(11.780)	(12.486)	(11.684)
Gross Profit	**8.307**	**7.434**	**6.699**	**8.495**	**8.266**	**6.856**
(-) Expenses	(2.502)	(1.973)	(1.882)	(2.286)	(2.280)	(1.987)
Adjusted EBITDA	**7.061**	**6.536**	**6.159**	**7.840**	**7.906**	**7.070**
(-) D&A	(1.018)	(1.480)	(1.746)	(2.029)	(2.315)	(2.600)
EBIT	**5.750**	**5.242**	**4.599**	**5.990**	**5.768**	**4.651**
(+/-) Financial Result	(749)					
(-) Taxes	(1.516)	(1.930)	(1.799)	(2.302)	(2.261)	(1.938)
Net income	**3.485**	**4.063**	**3.788**	**4.846**	**4.759**	**4.081**
Profitability						
Net margin (%)	19,38%	22,32%	20,98%	21,73%	20,63%	19,30%

Figure 2. CMIN – Cash Flow in BRL Million (Genial Est. 2023-2028)

Cash Flow (FCFF)	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**17.983**	**18.205**	**18.056**	**22.303**	**23.067**	**21.140**
(-) COGS	(8.658)	(9.291)	(9.610)	(11.780)	(12.486)	(11.684)
Adjusted EBITDA	**7.061**	**6.536**	**6.159**	**7.840**	**7.906**	**7.070**
EBIT	**5.750**	**5.242**	**4.599**	**5.990**	**5.768**	**4.651**
(-) Taxes	(1.516)	(1.930)	(1.799)	(2.302)	(2.261)	(1.938)
(+) D&A	1.018	1.480	1.746	2.029	2.315	2.600
(+/-) Δ WK	242	179	-32	(235)	-31	
(-) Capex	(1.380)	(1.486)	(2.508)	(3.585)	(5.060)	(5.124)
FCFF	**4.114**	**3.486**	**2.007**	**1.897**	**731**	**346**

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under Review	Under review	**5%**

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