



May 22, 2014

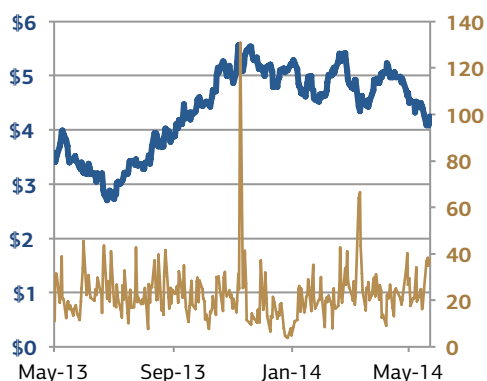
Australia | Resources

Fortescue Metals Group (FMG AU)

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FMG nearing a crisis

Fortescue Metals Group (FMG AU) one-year share price in USD (blue) and volume (gold, in mln shares)



Source: Bloomberg, May 22, 2013

Fortescue Metal Gp. (FMG AU)

Price	USD 4.24
Rating	Sell
Price target	USD 2.84
Difference	33%
Market Cap	USD 13.2 bln
Simple Moving Avg.	26.1 mln
P/E	4.43x

Source: Bloomberg, May 22, 2013

+ FMG port stocks up 66% YTD

Traders tell us, and our checks indicate, that FMG product port inventory has increased from around 15 MMT to 25 MMT this year. We believe that around 6 MMT is held in bonded zones in North China and is most likely owned by FMG. This is a drag on FMG working capital and a key reason why customers can push up the discount to benchmark on long-term contracts to 8.5%. The market is now in oversupply and steel mills do not want lower quality FMG product that requires sintering that is both higher cost and more polluting.

+ USD 1 bln cash payments due by end of 2014

FMG will have cash outflows of USD 1 bln in the second half of calendar 2014 (FY 2015 H1), including a deferred tax payment of USD 750 mln due in December. Assuming a base case of USD 100/ton for 62% Fe iron ore, we believe FMG will struggle to make those payments, and below USD 100/ton, FMG will likely reduce dividend and/or need to raise capital.

+ FMG costs still higher than peers

FMG claims it lopped around USD 15 off its total cost per ton and that its cash costs of mining are now around USD 34/ton. We estimate that the current cash costs are more like USD 40/ton. We believe the break-even iron ore 62% Fe price for FMG is still around a benchmark 62% Fe price of USD 85/ton.

+ Net debt ~USD 9, not 7.7 bln

We don't buy the net debt of USD 7.7 bln that FMG claims. The company simply swapped bond debt for pre-purchases of iron ore at a discount and delayed taxes. Net debt is more like USD 9 bln.

+ Price target: USD 2.84, downside of 33%

We assume an iron ore price of USD 100 per ton in 2015, falling to USD 90 per ton in 2016. We use a WACC of 10.3% and terminal growth of 2%.

No room for second best

From our checks with iron ore traders last week in China, it is clear that FMG has massive stocks in China and needs to discount heavily in order to sell. We believe that the continued tightening of terms of letters of credit (LOC) financing for iron ore traders will continue to exert downward pressure on the iron ore price.

The key problem is that less steel is being produced and end demand for steel is falling. We believe steel production has fallen 2%, not risen 5% as CISA claims. Our primary research supports this, as do other data sets: the output of the top 94 steel producers is down 2%, and pig iron production is flat YTD. New supply of iron ore coming into China YTD is up 20%. That equation makes for clear oversupply. The lower-quality iron ore inventory is building at ports, and discounts to the standard grade are widening.

The average discount of FMG product to the 62% Fe Index in May is now at 7%. We have heard that FMG long-term contract discounts in May are 7.5%, and June has gone up to 8.5%. FMG's effective price today is USD 83/dmt (dry metric ton). Traders tell us that the FMG 56.5% Fe, which we believe makes up 80% of FMG sales, is unpopular, as it has to be sintered before going into the blast furnace. Sintering costs around USD 18/ton and causes significant pollution. In the recent crackdown on polluting industries, a number of iron ore sintering plants were shut down. In an oversupplied market where buyers can now choose, demand for lower-quality product is plummeting.

Iron ore, now priced at USD 97/ton, is in a bear cycle.

We believe that China steel production is down around 2% thus far this year, contrary to the government's claim for growth of 5%.

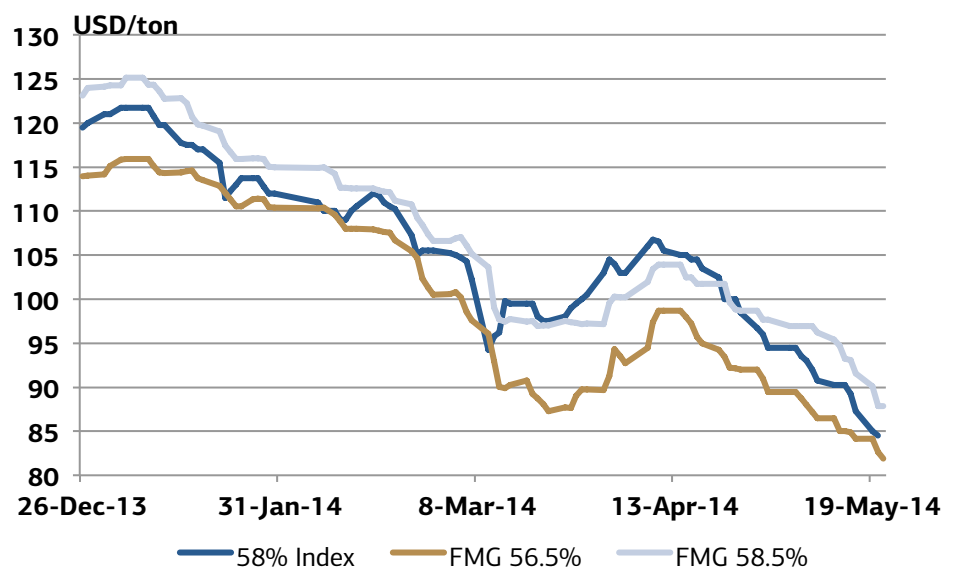
Storing, not selling

Iron ore traders across China have told us that FMG inventory has been increasing rapidly this year. One trader told us that 30% of the inventory or iron ore at ports is FMG product; we estimate that it is more like 25 MMT, or 22% of all iron ore inventory at port. We estimate this represents about 10 MMT or 40% of the total increase in inventory. Without a sharp increase in demand—and we think demand will actually fall, given what is apparently an incipient property collapse—this will put FMG in danger of having to drop its average price by about USD 5 per ton in order to avoid onerous working capital requirements.

Iron ore traders say they can purchase and take delivery of FMG product on the same day, while, for the equivalent Pilbara Fines, they must order and wait at least one week. Iron ore inventory at

port in China has increased by 25 MMT YTD 2014. Australian iron ore inventory at port has increased 15 MMT YTD 2014. Most of that inventory is of its 56.5% Fe product. Our checks indicate that FMG has around 6 MMT in bonded zones in Caofeidian and Jintang ports. We believe but have yet to confirm that this product is owned by FMG. We suspect that, as LOC financing has been tightening, traders are buying less FMG product and FMG is being forced to hold increasing volumes of iron ore at ports in China for sale.

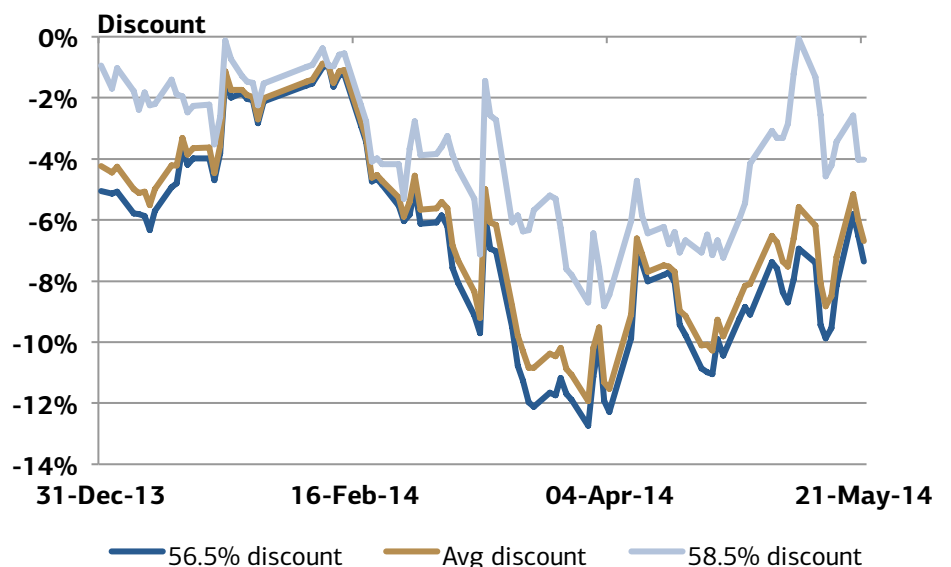
Chart 1. FMG port spot prices vs. 58% index



FMG product inventory is up 60% YTD, and is 22% of all port inventory in China.

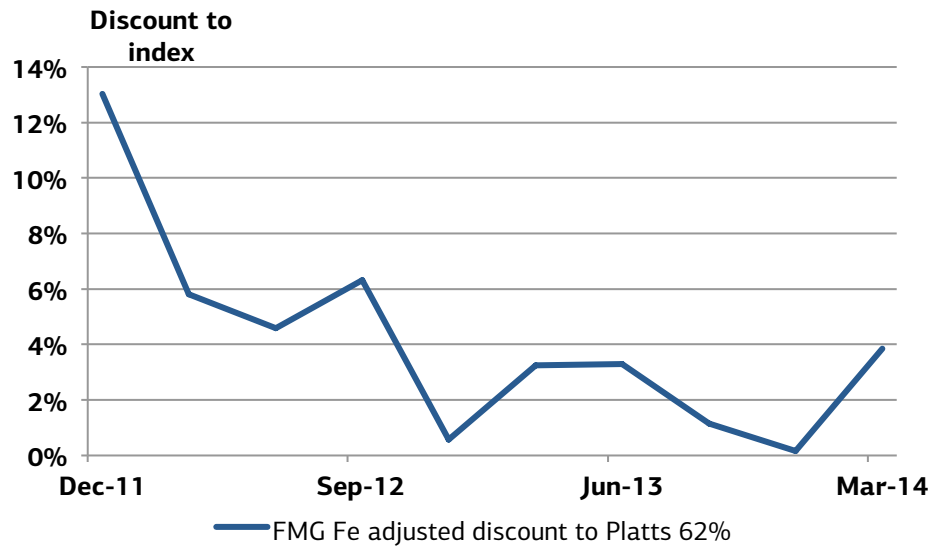
Source: MySteel, J Capital Research

Chart 2. FMG product discount to 62% Fe index



Source: Company data, J Capital Research

Chart 3. FMG Fe adjusted discount to Platts 62% index, historically



Source: Company Reports, J Capital Research

In recent years the FMG discount to the 62% index has been as high as 13% (December 2011), and so this is not unusual or surprising. The iron ore index 62% Fe price was at USD 146/dmt then, and it is at USD 97/dmt now. The discount level is much more critical to FMG’s margin now.

FMG, as the high-cost producer, will need to raise capital.

If there is a demand shock in China and production drops by 5-10% or steel mills reduce inventory instead of buying, then FMG could have as much as six weeks with very low sales. That happened in August 2012.

New supply of seaborne iron ore is surging and imports are up 20% YoY in March, but our property and steel research indicates that demand will remain weak. We see iron ore prices falling and FMG discount to the 62% Fe index increasing, squeezing FMG’s margin. FMG product inventory at ports in China will continue to rise.

Reducing costs by sleight of hand

FMG claims to be more competitive than we think it is. The company reports debt down by USD 3.1 bln and the cash costs of mining (C1) reduced by 25%, to USD 33/ton from USD 44/ton between March and December 2013. FMG also says its break-even price for 62% Fe fell to USD 70/ton.

We don't believe any of that. We estimate C1 costs are still about USD 40 and break-even costs around the benchmark 62% Fe price of USD 85/ton.

To offload the USD 500-750 mln necessary to make mining costs look more competitive, we think that FMG, has mined higher-grade material and leaned on new accounting rules and inflated pre strip costs to stuff costs onto the balance sheet. This will not be repeatable, and the company's reported per-ton costs will gradually creep back up.

FMG claims debt reduction of USD 3.1 bln, but they exchanged about USD 1.8 bln as debt in other forms. Prepayments increased by USD 1.2 bln over the last 9 months and deferred tax increased by USD 0.6 bln over the same period. Real debt reduction is more like USD 1.3 bln.

Meanwhile, in the real world of cash management, FMG runs into a danger point at the end of this year. Altogether they have cash payments of USD 1 bln due in CY 2014 H2. This is the cost to ship prepaid iron ore and to pay deferred tax. FMG may need to raise new capital as early as December, when the largest amount of these cash payments, a USD 750 mln tax bill, comes due.

Operating costs likely to rise

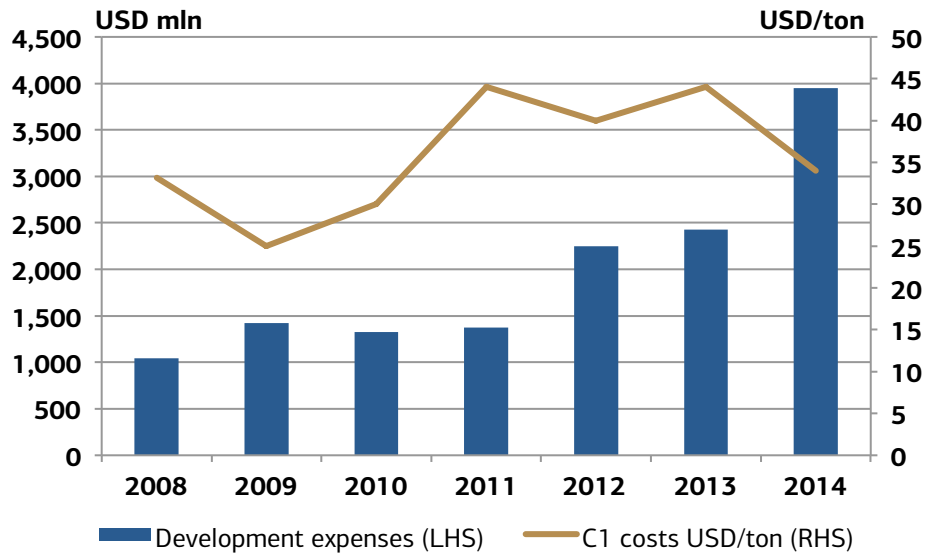
When developing a mine there is an opportunity to capitalize the pre-strip waste. Potentially, waste that may otherwise be considered operating costs may be capitalized. The preparation of the mine at the very least could be such that the best ore is revealed with minimum waste. This is called high-grading.

We believe that FMG may have packed costs into development expenditures that are capitalized on the balance sheet. Development expenditure increased 170% over the last 12 months, while new resources made available by the development increased by only 54%. Development expenses per ton of resource doubled. FMG increased development expenditure by USD 2.5 bln, to a total of USD 4 bln, over the past 12 months as it has increased production from 55 MMTPA to 155 MTPA.

We attribute this to new accounting rules for mines promulgated in January 2013. Those rules allow mining companies to capitalize more of the development expenditure if it can be shown that some of the waste material taken from the mine now will give improved access to resources in the future. We think FMG liberally interpreted those rules and put a lot of waste material into capitalized costs even though it should be considered a normal operating cost. FMG seems to have capitalized operating waste material at both the Chichester (the old mine with high strip costs) and Solomon (the new mine with low strip costs).

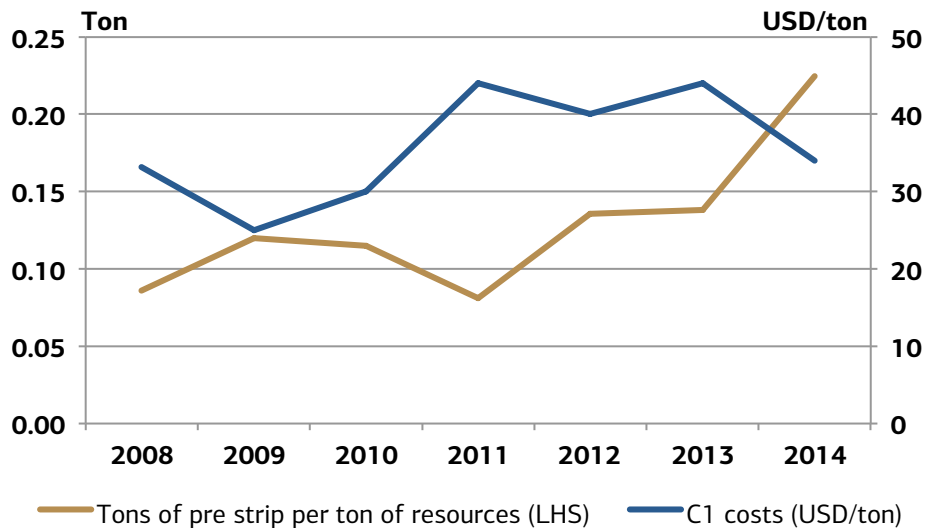
FMG increased development expenditure by USD 2.5 bln, to a total of USD 4 bln, over the past 12 months.

Chart 4. FMG development expense growth and C1 cost changes



Source: MySteel, J Capital Research

Chart 5. Development expenditure per ton of resource vs. C1 costs



Source: MySteel, J Capital Research

Analyzing FMG cost historically since 2008, there is a pattern where development expenses are high and then C1 costs rise by 60% in subsequent years. We estimate that USD 500-750 mln of operating costs were capitalized in that period as well. As in that period, we believe that now mining costs will rise, and C1 costs will move to USD 38/ton over the next few years.

As the new Solomon mine, with the much lower strip ratio, comes online and contributes more volume, the average strip ratio will trend down and the impact of FMG adjusting strip ratio at the Chichester mines back up to the higher level will be less obvious.

The FMG narrative for reducing C1 costs is a new “wet front end” process at the Chichester mines. The story goes that, with this new process they can reduce the cut off grade of iron ore and therefore reduce the strip ratio. We just don't believe that for several reasons:

We doubt that FMG's “wet front end” process at the Chichester mines will lead to a reduction of the strip ratio.

- FMG has never disclosed the mine plan or even the cut-off ratio for any of its mines. Who knows what the cut off rate changed from and to?
- They **had** to install a “wet front end” as they are now mining below the groundwater. This is **why** they installed the process, not to improve the strip ratio.
- The earliest plans for the mine included a “wet front end,” yet they never guided that this would reduce the strip ratio.

Fishy deal with Formosa Plastics

We believe that the USD 1.15 bln deal FMG struck with Formosa Plastics Group in August 2013 makes no commercial sense. At current iron ore prices, using dry processing, this mine would make a negative margin. To further invest in wet processing is even less likely. We don't expect this mine will ever operate and we wonder if FMG may have any future obligations to Formosa Plastics when this decision is made.

The Iron Bridge mine has a magnetite resource with 32% Fe, and we estimate the total costs of production will be USD 100/ton. The data FMG has released would indicate a low strip ratio of 0.9:1 and a yield of 80% that indicates, and their environmental report filings confirm, that you would need around 2.5 tons of ore to make one ton of product. In addition, the product will be trucked to port and not travel by rail, increasing transport cost from around USD 2/ton to at least USD 10/ton. This will mean C1 costs of USD 65/ton and total costs of USD 81/ton—all premised on using the high capital and operating costs of wet processing. FMG claims that they will use dry processing, which would lower the yield and bring C1 costs to USD 82/ton and total costs to around USD 100/ton. The mine will most likely operate at a loss at current and projected iron ore prices. We don't believe Stage 2 of the mine will ever be built.

Formosa paid USD 123 mln for a 31% stake in the mine and gave FMG USD 527 mln to fund all the capital costs, of which USD 340 mln will be used on stage one. Formosa then prepaid USD 500 mln for port access. At best, that would mean a return of 0.5% on total capital for Formosa.

FMG's Iron Bridge deal with Formosa Plastics has several irregularities; it has no commercial sense and we believe that the mine's Stage 2 will not be built.

As if that weren't bad enough, Formosa is getting precious little for its prepayment of USD 500 mln for port access. Given the 4.5-year term FMG reported and the production volume anticipated, it works out to USD 111/ton for the right to access the port, while FMG's cost for operating the port is around USD 2.5/ton.

Formosa can issue USD-denominated bonds at around 1.5%, while FMG's average debt cost is now around 7%. It makes sense for FMG to pre-sell iron ore to Formosa, possibly for use in Formosa's new steel plant in Vietnam, disguised as an investment and a prepayment for port access. We have no evidence that this is the case.

If that were the case and given that Formosa's Vietnam plant is set to open in 2015, the company will most likely start taking delivery of that iron ore in 2015, and this will have a negative effect on FMG cash flow.

Valuation USD 2.84 down 39%

We use a WACC of 10.3 and a terminal growth rate of 2% to arrive at a price target of USD 2.84 in our base case. We assume the iron ore price is USD 100/ton in FY 2015 falling to USD 90/ton in FY 2016 and staying at that level. The AUD falls to USD 0.85 in FY 2015 and to USD 0.80 in FY 2016.

Table 1. Key Assumptions

	FY 2014	FY 2015	FY 2016	FY 2018	FY 2019	FY 2020
Sales Volume MMTPA	119.3	150.8	151.3	151.3	151.3	151.3
C1 Costs (USD/ton)	34.3	36.9	37.3	37.3	37.3	37.3
Admin Costs (USD/ton)	-2.7	-1.9	-1.7	-1.7	-1.7	-1.7
Total EBIDTA Cost (USD/ton)	51.1	51.8	51.9	51.9	51.9	51.9
Net Interest (USD/ton)	6.5	4.5	4.4	4.4	4.4	4.4
Sustaining Capex (USD/ton)	8.4	6.6	6.6	6.6	6.6	6.6
All in Cost Wet (USD/ton)	66.0	62.9	62.9	62.9	62.9	62.9

All in Costs Dry (USD/ton)	73.3	69.9	69.9	69.9	69.9	69.9
FMG Price (USD/ton)	118.7	86.1	77.5	77.5	77.5	77.5
Iron Ore Price 62% Fe (USD/ton)	135.0	100.0	90.0	90.0	85.0	85.0
AUD/USD	0.9	0.85	0.8	0.8	0.8	0.8

Source: J Capital Research

Valuation scenarios

We base our best-case scenario on how we estimate FMG would project the future price of iron ore. Our base case is based on low steel growth in China. Our worst case would see a low reduction in the steel produced in China.

Table 2. Valuation scenarios

USD/ton (Iron ore 62% Fe)	FY 2014	FY 2015	FY 2016	FY 2018	FY 2019	FY 2020	Share price
Best Case	135.0	115.0	110.0	100.0	100.0	100.0	5.66
Base Case	135.0	100.0	90.0	90.0	90.0	90.0	2.84
Worst Case	135.0	90.0	85.0	85.0	85.0	85.0	1.47

Source: J Capital Research

Risks

- The price of iron ore rises rather than falls and is sustained at levels over USD 100/ton.
- FMG costs reductions prove to be sustainable. This would be true if they were not capitalizing costs and they have been able to reduce costs to the level claimed.
- The Chinese economy outperforms our expectations, due to stimulus or other reasons, and construction demand for steel continues to grow.

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