



# **BoP Constrained!**

There's a lot I want to cover in this week's Brief. First, I want to clarify a little more what the structural growth challenges are that emerging markets are facing. Then, we'll do a brief discussion on DOTM trade management. And finally, we'll finish with an updated Marcus Trifecta look at markets and discuss some trades we're looking at.

In our most recent MIR we talked briefly about the growth struggles of EM in the context of the Gerschenkron Growth model, using China as our example.

Our conclusion was that China, and EM in general, is set to be a dead money trade and massive value trap for the remainder of this cycle.



So let's flesh out a little more why this is likely to be the case.



To start, what exactly separates an emerging market from a developed one? Here's a good explanation from Eric Lonergan writing on his blog *Philosophy of Money* (emphasis by me).

Emerging markets are not poor countries, nor are they countries which are making economic progress. They are defined by a very specific set of macroeconomic properties, which financial markets are conscious of, but are rarely clearly articulated.

The overriding characteristic of an emerging market is that a currency devaluation is a tightening of policy. In the developed world, a devaluation is typically an economic stimulus, indeed it often coincides with an easing of monetary policy through lower interest rates or an increase in QE. The post-Brexit policy response of the Bank of England is a case in point – sterling fell sharply and the Bank cut interest rates and initiated more QE.

In emerging markets the opposite occurs. These economies usually have public and private sector liabilities denominated in a currency which they do not issue. So when the Turkish Lira falls against the dollar the burden of finance on many Turkish corporates increases. Due to their US dollar liabilities, the interest payments and capital repayments in Turkish Lira rise. That is the first way in which a devaluation is a tightening of monetary conditions.

The second mechanism is more instructive and carries important lessons for monetary reform in the developed world, and in particular how we should think about the challenges posed by the zero-bound.

Emerging markets suffer from widespread price indexation and significant inflation expectations. In other words, when the currency falls, inflation rises, and when inflation rises the economic system attempts to respond by raising wages, and then raising prices. The 1970s concept of a wage-price spiral has meaning.

Because emerging markets have widespread wage and price indexation and alert inflation expectations central banks cannot exploit 'temporary' increases in the inflation rate by reducing real interest rates and stimulating demand, as they do in the developed world. Central banks, as we have seen in Brazil, Turkey and South Africa, have to respond to devaluations by tightening policy in order to prevent an increase in the underlying inflation rate.

EMs have what are called soft currencies, which is one of the three subsets of currencies in the global core-periphery paradigm that we talked about in our Jan 17' MIR <u>Vicious or Benign?</u> To recap, these are:

1. The reserve currency which is currently the US dollar.



- Hard currencies, that come from countries that can lend to themselves at competitive
  rates. These tend to be net-importers of commodities. Hard currencies generally act as
  safe-havens during periods of risk-off.
- 3. And soft currencies. Soft currencies tend to be commodity producers. They are countries that have to borrow in other currencies at higher rates. These currencies depreciate during periods of risk aversion.

So... EMs are countries with soft currencies whom have to borrow in foreign hard money (typically dollar or euros) and therefore run into debt repayment problems when their currencies fall *AND*... due to widespread price and wage indexation, suffer from higher inflation when their exchange rate drops forcing their central banks to carry out procyclical tightening (ie, raising interest rates into a crisis) which causes a spiraling negative economic shock.

These conditions are what lead to the standard balance of payment (BoP) crises that EMs go through seemingly every few years.

A typical BoP crisis looks like this:

- Rapid economic growth attracts large capital inflows from foreign investors chasing higher returns.
- > This capital flows into equities and hard currency denominated debt.
- ➤ The strong domestic growth leads to a rise in imports which creates a current account deficit (more imports than exports) which then needs to be financed by more foreign capital flows.
- > Eventually, growth slows and debt reaches levels that cause foreign investors to become concerned about the country's ability to service it and pay it back.
- > This causes the hot money flows to reverse, which drive the currency down, making the hard currency debt more expensive to repay, which causes more hot money outflows, in a crushing positive feedback loop.
- This goes on until the central bank raises interest rates enough to steady the currency and domestic demand collapses which brings imports back below exports, thus balancing the current account.

This is what we're seeing variations of occuring in EM now, specifically in Turkey and Argentina.

But here's why this time is going to be different.

You see, in the past, an EM BoP crisis led to a painful but typically very short, economic contraction where the economies and markets experienced v-shaped





recoveries. The 97' Asian crisis being a perfect example.

They were able to do this because they were rapidly expanding their share of global exports from a low base. A devalued currency meant more attractive exports which meant rising profits and a quickly balanced current account (exports greater than imports). This enabled EMs to deleverage and grow their way out of trouble.

Sri thiruvadanthai of the Jerome Levy Institute wrote about this in one of his <u>recent papers</u> (emphasis by me).

Given this background, it is clear why globalization, especially the period 2000-08, was so beneficial for EMs. Globalization allowed EM exports to DMs to grow exponentially, relaxing the BOP constraint. Moreover, increased capital flows allowed EMs to build their foreign currency reserves, further weakening the BOP constraint. The process of building reserves also fueled demand for safe assets, depressing yields in DMs and extending the unsustainable process of debt-fueled growth in the DMs. However, the EM boom of the 2000s was in part supported by an unsustainable debt driven growth in the DMs. Thus, when the financial crisis of 2008-09 forced DMs to deleverage, it undermined a key pillar of EM growth. The weakness of DM growth post 2008 and the plateauing of offshoring and outsourcing meant that EM export growth hit a wall. Initially, EMs were able to counteract these headwinds by running large fiscal deficits and by turning to domestic profit sources. As we have seen in a previous section, domestic profit source growth requires domestic credit creation. Unsurprisingly, EM credit growth exploded post-2008, and not just in China. The limits of EM domestic demand-driven strategy were reached sometime in 2012-14, and since then EM economies have been struggling.

EM's structural growth limitations can be boiled down to the following:

- EMs are BoP constrained. Since they have soft currencies meaning, they can't finance current account deficits in their own money they can't grow faster than their exports for an extended period of time. Because, a current account deficit leads to a build up of hard currency debt, hot money outflows, and a BoP crisis.
- ♦ EMs have maxed out their market share of global exports. EMs now comprise over 50% of global non-commodity exports (see chart below) and further export share growth will likely be from one EM cannibalizing another. Globalization has peaked and with increasing trade tensions, we should even see a reversal of some of the outsourcing and offshoring that's occurred over the past two decades.
- ♦ EMs are facing a significant debt burden amid tightening global liquidity. EMs are weighed down by a large amount of debt which they've accumulated in financing their current account deficits over the last decade, and much of this debt is dollar



denominated. Rising US interest rates and a strengthening dollar will continue to put pressure on EMs going forward.

#### Share of Global Non-Commodity Exports 1970 2000 2010 **Developed World** 68.1% 49.3% Developed world broadly losing market share to EM United States 20.2% 18.2% 17.6% 19.4% 12.7% 13.2% US and Euroland losing market share Euroland 32.7% 32.8% 26.9% 23.0% 22.7% 21.1% Japan 11,7% 13.6% 15.8% 10.4% 7.4% 5.6% Japan peaked in the 1990s United Kingdom 10.9% 8.5% 7.7% 5.9% 3.6% 3.3% Canada 6.0% 4.0% 4.2% 4.8% 2.4% 2.3% 0.5% Australia 0.4% 0.6% 0.6% 0.5% 0.4% Switzerland 2.8% 2.5% 2.5% 1.8% 1.9% 1.8% Sweden 2.4% 1.4% 2.8% 1.796 1.096 Norway 0.1% 0.6% 0.5% 0.4% 0.3% 0.2% New Zealand 0.2% 0.2% 0.2% 0.1% 0.1% 0.1% EM share has risen to roughly half of global exports 12.29 31.9% 46.99 50.7% **Emerging World** 0.9% 1.0% China 2.0% 5.2% 17.2% 20.9% China's share has increased dramatically EM Asia ex-China 4.0% 8.1% 14.5% 18.8% 19.7% 19.2% 0.0% 0.2% 0.6% India 0.3% 1.3% 1,4% India's share still small, but increasing South Korea 0.4% 1.5% 2.9% 3.3% 4.4% 4.3% 0.5% 0.8% 0.9% 0.9% Indonesia 0.1% 0.7% Taiwan 0.9% 1.9% 3.1% 3.0% 2.4% 2.2% Thailand 0.3% 0.8% 1.3% 1.6% 1.6% Malaysia 0.3% 0.5% 0.9% 1.9% 1.7% 1.4% 0.3% 0.8% 0.5% 0.5% **Philippines** 0.2% 0.3% 0.5% 1.196 1.8% 2.7% 3.0% 2.7% Singapore Hong Kong 1.3% 1.8% 3.7% 4.4% 4.0% 4.2% Latin America 2.0% 2.9% 2.9% 4.6% 4.0% 4.4% Share for Latin America basically stable 0.9% 0.8% Brazil 0.5% 1.2% 1,1% 0.8% Mexico 0.5% 0.6% 1.3% 3.2% 2.5% 3.1% Argentina 0.196 0.3% 0.2% 0.2% 0.3% 0.2% Colombia 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% Venezuela 0.4% 0.4% 0.2% 0.0% 0.0% 0.0% Chile 0.0% 0.0% 0.1% 0.1% 0.2% 0.1% Peru 0.4% 0.2% 0.1% 0.0% 0.1% 0.196 Ecuador 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Central and Eastern Europe 4.6% 3.196 1.9% 2.9% 5.4% 5.6% Big gains in EM Europe, stable recently 0.2% 0.2% 0.2% 0.5% Russia 0.5% 0.6% 0.2% 0.4% 0.5% 0.9% 1.0% 1.196 0.7% 0.4% 0.6% 1.5% 1.6% Czech Republic 2.4% 1.296 0.6% 0.6% 1.396 1.496 0.5% 0.6% 0.3% 0.6% 1.0% 0.9% Hungary Bulgaria 0.2% 0.2% 0.1% 0.1% 0.1% 0.2% South Africa 0.5% 0.6% 0.3% 0.3% 0.3% 0.3% Saudi Arabia 1.0% 0.2% 0.3% 0.3% 0.196 0.1%

Then of course there's a deleveraging China, which has been a big source of demand growth for EMs over the last decade but won't be any longer.

So EMs are in a tough spot going forward. They need to rebalance their economies and boost domestic demand since they can no longer rely on exports as a serious source of growth. But, until they can get other countries to accept their currencies as payment, they will remain BoP constrained by their soft currency which won't allow them to grow faster than their export growth. Which, as we've discussed, is going to be low.

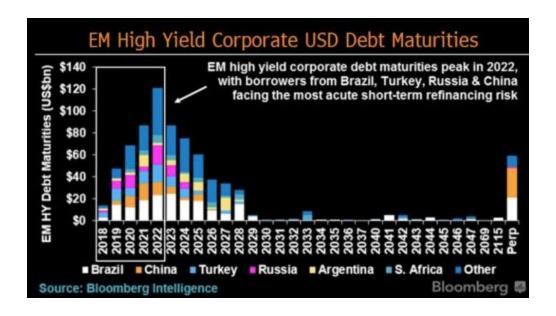


I see a lot of investors and financial journos talking about how now is a good time to buy EMs. They're all playing off the old EM playbook and are expecting a v-shaped recovery which is not going to materialize. What will, is a slow moving economic contraction with occasional country specific crisis that will frustrate investors trying to bottom pick.

Select EMs will make for incredible asymmetric investments once the next cycle begins in a few years time. By then, I expect the narrative to have completely flipped from where it is today and EM in general will be a hated and completely discarded asset class. That's when it'll be a good time to buy.

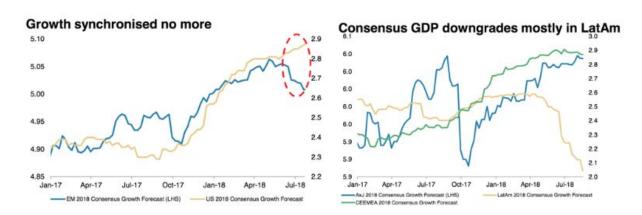
Lastly, here's some good charts that show some of the headwinds EM is up against in the coming years.

A large amount of EM corporate high yield USD debt is maturing in the coming years. As the dollar continues to strengthen, the global dollar shortage will become more apparent and EMs will suffer for it.

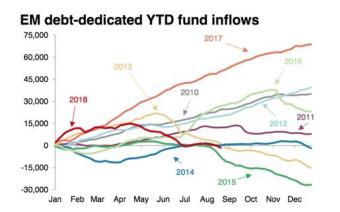


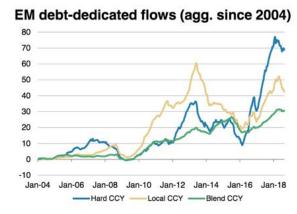
Global investors put money in EM stocks and bonds (which are generally seen as riskier) because they are chasing higher relative growth and thus, higher returns. When their growth is declining relative to that of DMs then there's little reason for investors to invest in EM. This is part of the core-periphery paradigm.





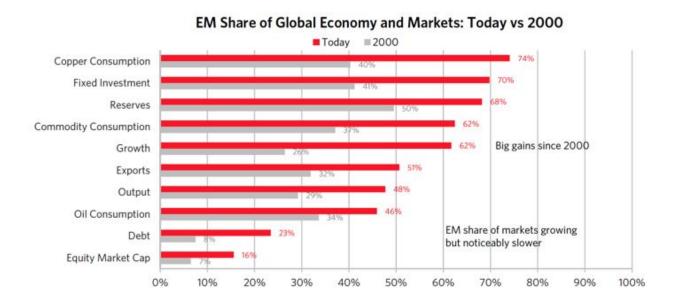
Over the last few years, there's been a huge amount of hot money flowing into EM equity and debt. There's still plenty of capital that needs to be unwound.





There's going to be a reflexive global growth feedback loop in all this. EMs today make up a much larger share of global growth than they did 20-years ago. A slowdown in EM will drive a slowdown in developed markets which will reduce EM export growth, further constraining their ability to grow and so on.





	1970	1980	1990	2000	2010	Today	In 10 Years
Dev World	72%	69%	67%	65%	50%	44%	37%
<b>Emerging World</b>	28%	31%	33%	35%	50%	56%	63%
China	4%	5%	7%	11%	21%	27%	29%
United States	32%	25%	25%	24%	22%	18%	15%
India	3%	3%	4%	5%	7%	8%	13%
Euroland	23%	24%	18%	18%	15%	12%	9%
Brazil	2%	4%	3%	3%	3%	4%	6%
Russia	5%	5%	5%	196	4%	4%	4%
Japan	9%	1196	12%	10%	5%	5%	4%
Mexico	2%	3%	2%	2%	2%	2%	3%
South Korea	0%	196	2%	3%	3%	3%	2%
United Kingdom	4%	4%	3%	4%	3%	3%	2%
Argentina	196	196	196	196	196	196	2%
Thailand	0%	196	196	196	196	196	2%

## **DOTM Trade Management Discussion**

Tyler and I have been talking a lot about trade management, specifically pertaining to how we manage DOTMs that increase so much in value they become high delta large open positions within the portfolio. This is, of course, a great problem to have because it means you've made a lot of money on your options but nonetheless, it's still a problem that needs to be dealt with.

This discussion, which then incorporated some great insights from other MO teammates in Darrin and Biren, began because of our good run in AMD.



Here's how the trade has played out so far (we're still in both stock and options but at reduced size).



Our DOTM calls that we bought in July for \$0.40, traded for as high as \$8 when we decided to take profits on half the position last week — that's a gain of nearly 20x. And the options still have roughly 3+ months till expiry.

When an option increases in value like this, you end up with the problem of having tons of open profits — the position becomes a large percentage of your portfolio — and that position has an extremely high delta (meaning, it's extremely sensitive to the price of the underlying and so experiences high volatility).

Like all things in this game, there is no simple answer as to what's best to do when you reach this point. Your options are to (1) take full profits, put money in the bank, and celebrate your big win (2) take partial profits and let the rest ride or (3) sit on the trade and let it ride to expiry, potentially turning your large gains into massive ones.

The two most important variables we need to weigh in making this decision are what action has the largest expected value (EV) and what action best aligns with your portfolio goals and psychological makeup.



Here's some thoughts from Operator Darrin, Operator Biren, and Tyler on the matter (with some edits/emphasis by me).

<u>Biren:</u> Seriously, though, think about the EV and your risk tolerance, right? **You've got a super high delta position now. Every dollar is worth a lot in both directions.** You're most likely in a 1:3 or 1:4 risk to payout ratio in a position sized large you'd never ever let yourself buy it. The good thing is the strategy never lets you blow up—because you're only risking winnings—but it's the same bet.

Honestly, it's easier to just cash in. You'll be reducing your EV, but celebrating your big win. If you've got the risk tolerance, though, the right thing to do is to hold.

<u>Darrin:</u> I've been lucky to know some real traders w/ what I'd call "market wizard dna". One, just made an additional 2mm dollars on LULU overnight (post earnings). I only bring this up because I think this insight can offer clarity for new traders/investors...

This trader was in a drawdown for 6-months that was > -30%. He held conviction in this trade (long gamma, long dated) for almost a year. It was his largest holding. He analyzed the fundies, the vol term structure etc...

At the point in which the trade started to yield some strong profits, he held on. We are talking .03 delta —>.50 delta kind of profits. Yet, he continued to hold on. The moral of the story is that 95% of humans do not have the ability to actually execute at this level.

I meet so many smart quantitative analysts and traders, yet I know that almost none of them have the behavioral edge necessary to reap the benefits of triple digits even four digit returns—and that's perfectly ok!

I say all of this to remind retail traders that it's ok to be average. It's ok if a 20% return on 100k is the best you can do. The financial media have done everyone a disservice. They omit the part of the big short where they held losing options for YEARS before getting rich.

I can only speak for my own experience, but the biggest difference between the market wizards and everyone else is probably DNA. They have an ability to take risks on large sums of money that the average person could never imagine. That's a major edge...probably the biggest edge available.

<u>Tyler:</u> Those guys (Biren and Darrin) are right in that it mainly comes down to risk tolerance and psychology which in turn comes down to how large is the position as a percentage of your net worth.



If you put \$10,000 in a DOTM and it turns into 100-200k and you have a networth of a million, well that is a really hard position to hold. Much harder than say if your net worth was 10 million. The psychological game is a game of relativity which is why figuring out how long to hold is so personal.

Fact of the matter is that the larger that position is relative to your net worth the more torture you will have to endure. It's extremely painful to see money that matters to you evaporate — which is exactly what can happen if you decide to hold.

Deciding to hold after a DOTM has appreciated is a decision of risking 10 to make 10 or 20. It's no longer a decision to risk 1 to make 20. If you decide to hold you have to be psychologically prepared to watch all the open profits go to 0 or significantly decrease. If you can't handle that then sell part or all of it.

Holding all the way to expiry is likely the more profitable route, but it's a bumpy ride. While taking all or partial profits is a much smoother one. You lock in a good amount now and don't have to suffer through major drawdowns.

Selling puts cash in your pocket now and makes your short-term return profile look better. Selling later is better for long-run compounding but the short-term equity curve of your account can be straight up hell.

At the end of the day I think it all comes down to (1) relative pos sizing as a function of net worth and (2) How you are trying to optimize your performance.

If it is really large in comparison to net worth, only a select few like the guys Darrin mentioned, can actually hold through that. Most people should take gains. If it is a small position size relative to net worth, holding is easier and probably the best route.

If you need to make your performance look good in the short-run (start-up fund, start-up business, some situation where you need to show good performance now) then taking profits sooner and more aggressively is the better route.

If you are sitting on true long-term capital, and don't need to impress anyone with returns in the here and now, then lean towards holding because that will compound capital at the highest rate in the long run... but you'll have to stomach lots of portfolio volatility along with it.

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Alex again.



I love discussions like these that get into the weeds of portfolio and trade management. These are really the most important questions to be thinking about but for some reason these topics are totally absent from most people's thought processes.

As for me, I sit in the middle as far as what to do. The highest EV move is to sit on your option till expiry. But to do so, you'll have to stomach massive portfolio volatility and potentially see your large paper profits go to zero. This take enormous amounts of faith in your process and can be extremely trying psychologically.

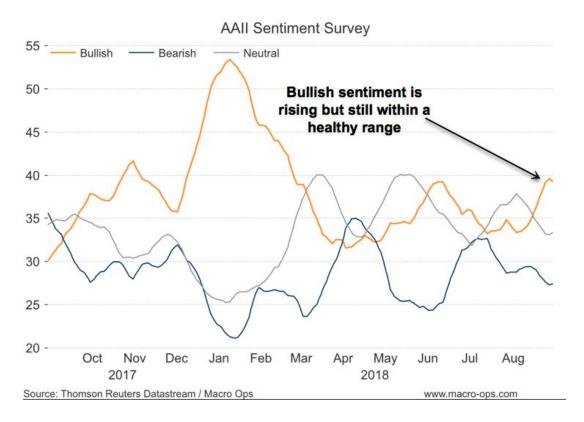
That's why I like to cut the difference and take partial profits and let the rest ride. This allows you to turn soft profits into hard profits, smoothing your equity curve, while still staying in the trade to capture further upside.

#### **Marcus Trifecta Look at Markets**

- ♦ Sentiment: Bullish sentiment as measured by AAII is rising but still within a healthy range. This is supportive of further stock gains.
- ❖ **Liquidity:** Financial conditions have been easing over the last few weeks and remain near cycle lows. This is supportive of further market upside.
- ♦ ROC Yields: The rate of change in yields is picking up. Bonds compete with stocks for capital and fast rising yields act as a headwind on stocks. Yields are still within a neutral range but if they keep rising at this rate, they'll become a major headwind to stocks within the next few weeks.
- Put/Call Positioning: The Total Put/Call composite ratio is at neutral levels but falling. A falling PC ratio means investors are becoming complacent and demanding less protection from downside moves. This indicator is still neutral but close to signalling a positioning headwind for stocks.
- Market Breadth: Stocks trading above their 50dma are at neutral levels and are supportive of further stock market gains.

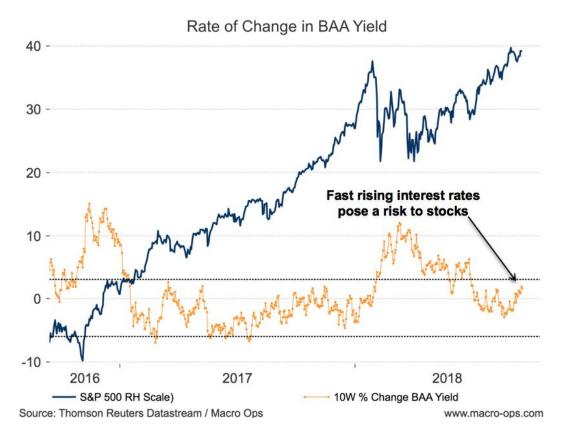
**Summary:** The path of least resistance for US stocks remains up. But yields are rising fast and positioning is becoming complacent and if this continues we should expect a minor correction in the next few weeks.

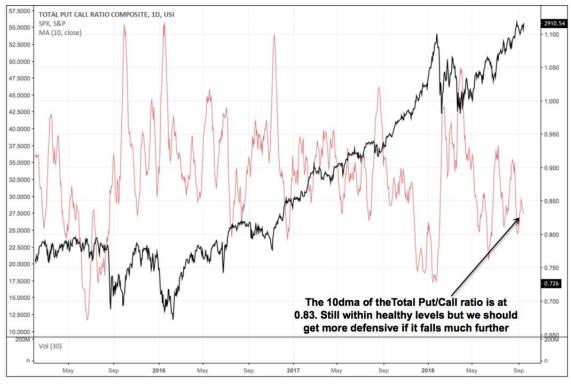




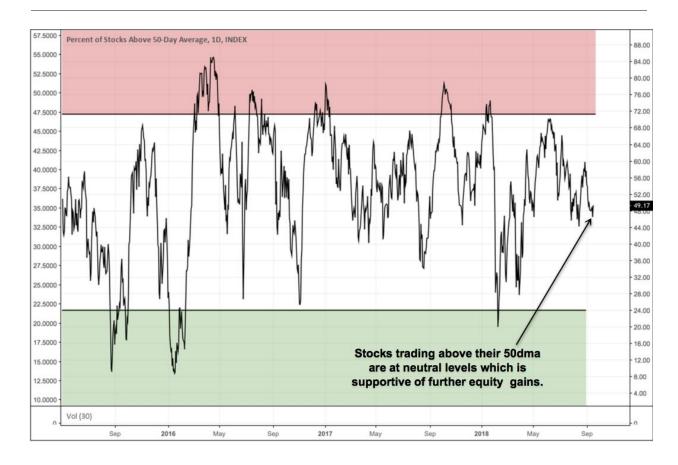












# What we're looking at

This week I'm digging into Carbo Ceramics (CRR). It's an oil and gas services company that specializes in carbo ceramic proppants primarily used in fracking. If you've been with us for a while, you may remember us covering this stock about a year ago.

Though I'm currently neutral in my read on the oil market at the moment — it could go either direction — I was attracted again to CRR because of the large amounts of insider buying and dramatically improving fundamentals.





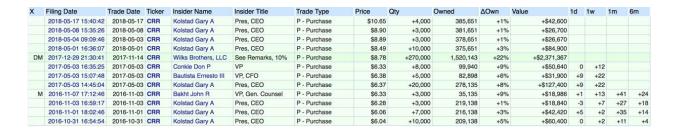




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The stock trades at just 1.2x EV/Sales and 0.6x book which is cheap for a company with growing revenue. The company has low levels of debt and management has been buying a good deal of the stock. The Wilks Brothers, billionaire oil investors, have also jumped in.



Here's the highlights from their latest quarter.

HOUSTON, July 26, 2018 /PRNewswire/ -- CARBO Ceramics Inc. (CRR) today reported financial results for the second quarter of 2018.

- Revenue for the second quarter of 2018 of \$58.0 million, an increase of 33% year-onyear and 17% sequentially, resulting from solid revenue growth in our oilfield, industrial and environmental sectors.
- Revenue growth contributed to a strong Adjusted EBITDA incremental margin of 55% year-on-year; an improvement from an Adjusted EBITDA incremental margin of 42% year-on-year in the first quarter of 2018.
- Expect strong sequential and year-on-year growth in revenue and Adjusted EBITDA for the third and fourth quarters of 2018, resulting in positive EBITDA for entire second half of 2018.
- Management reiterates 2018 full year revenue guidance of approximately \$250 million.

I remember really being impressed with management and the company's culture (workers on Glassdoor talked about the company as if it was a family) when I dug into the company last year.

It seems like there's a lot of pessimism baked into this stock, despite the dramatically improving underlying fundamentals. Might be worth a trade though I still have some digging to do. I'll keep y'all posted.



### **Portfolio**

Yelp (YELP) looks set to make new 52w closing highs soon. I have high conviction on this trade and want to build up our position to more properly match my conviction levels. It's currently 10.5% of our portfolio and I want to bring that closer to 15-20%. We'll be adding more to it this week and then opportunistically on selloffs. Look for a trade alert soon.



Online home delivery retailer, StitchFix (SFIX), has risen 50+% since our entry back in July. This is another position we want to build up and we're planning to add on pullbacks. I believe this company has a long runway and we'll be patient in managing this trade.





GAIA Inc. (GAIA), the Netflix for new age spiritual content, has retraced over 30% now and is trading down at its 200-day moving average. An area that has served as key support in the past.





My take on Gaia which I shared last with you guys in our March 18' MIR, remains the same. I think this is a \$60+ stock. Here's what I wrote then:

**Our Take:** GAIA has been crushing it and consistently so. Jirka Rysavy, the CEO monk, one of the best and lesser-known capital allocators in the game, is setting the bar high and surpassing it every quarter. With the company's current and expected growth, there's no reason why the stock can't/shouldn't 3-4x from here. Just look at the numbers.

Their service is expected to hit one million subscribers by 2019. That equates to a revenue run rate of roughly \$110m. The business is fully funded for the next 24 months at which time it plans on lowering spending on customer acquisition and bringing down growth from the current 80% y/y rate to a more sustainable 20%.

So in under two years, this \$200m market cap company will be generating free cash flow somewhere in the ballpark of \$45-60m. And what type of multiple do you give a company that's growing free cash flows at roughly 20% a year? 15 or 20x maybe?

Let's be conservative and give it a cash flow multiple of 15. 15 times \$50m is \$750m which is 3.75x higher than where it's trading right now. A 20x multiple would give it a market cap of \$1B which would mean the stock would trade at \$65 a share.

Jirka is one of the few CEOs that I would back in nearly any endeavor. The guy has a long history of delivering results and building big highly profitable businesses. GAIA looks set to be another notch on the belt.

The stock had been battling the \$13 level for the last six months but it finally punched through last week. A large holder of the stock that we know, had a large sell limit order there that has finally been fully liquidated.

The stock is currently trading at around \$16 a share. Seems like a pretty good risk/reward opportunity to me.

I'm still waiting for another chance to get short AUDUSD. I think we're about to see it retrace up to its 50dma (red line below) which has served as a critical line of resistance in the past. This will be a great entry point for us to put a position on. Like I wrote in the latest MIR, I think AUDUSD is going sub 0.60. We just need to see a good positioning and sentiment reset of long dollar and short metals trades first.





I'm also keeping a close eye on the semis. We still have our position in AMD but MU is incredibly cheap and looks oversold and the price action in INTC and AVGO also looks compelling. The problem with some of these companies is the risk of China bringing the bat to a company like MU, which gets a lot of its revenues from them, as these trade wars escalate.

That's all I've got.

If you've got any questions for us in the meantime, let us know in the Comm Center.

Your Macro Operator,

Alex



| Macro Ops Portfolio |                           |        | YTD        | Inception (16') |             |            |            |
|---------------------|---------------------------|--------|------------|-----------------|-------------|------------|------------|
| NAV \$3,074,768     |                           |        | 13.73%     | 53.05%          |             |            |            |
| Big Bet Macro       |                           |        |            |                 |             |            |            |
| Asset Class         | Position                  | Size   | Cost Basis | Risk Point      | Open Risk   | Target     | Last Price |
| Equity              | NVR Inc (NVR)             | 104    | \$2,765.58 | \$2,545.00      | \$10,192    | \$4,000.00 | \$2,643.00 |
| Equity              | Yelp (YELP)               | 6,667  | \$45.10    | \$40.65         | \$36,002    | \$80.00    | \$46.05    |
| Equity              | Stratasys (SSYS)          | 12,396 | \$24.76    | \$20.50         | \$30,866    | \$50.00    | \$22.99    |
| Equity              | Discovery DISCA           | 3,450  | \$28.09    | \$26.70         | \$18,768    | \$60.00    | \$32.14    |
| Equity              | Stitch Fix SFIX           | 1,750  | \$32.96    | \$27.00         | \$39,690    | \$60.00    | \$49.68    |
| Equity              | Advanced Micro AMD        | 3,718  | \$14.84    | \$19.00         | \$50,937    | \$25.00    | \$32.70    |
| Equity              | United Insurance UIHC     | 13,000 | \$16.98    | \$19.20         | \$21,970    | \$20.00    | \$20.89    |
| Equity              | Google GOOGL              | 332    | \$1,073.37 | \$1,100.00      | \$25,896    | \$1,400.00 | \$1,178.00 |
| Equity              | Disney DIS                | 5,694  | \$102.34   | \$108.50        | \$3,303     | \$150.00   | \$109.08   |
| Equity              | Yatra Online YTRA         | 36,819 | \$7.24     | Investment      | ~           | \$15.00    | \$5.09     |
| Equity              | DAX December Futures      | -2     | €11,960.0  | €12,420.0       | €15,500.00  | €10,600.0  | €12,110.00 |
| Equity              | BABA Jan '20 110 Puts     | 150    | \$4.10     | \$0.00          | \$49,500    | \$20.00    | \$3.30     |
| Equity              | SPX Mar '19 3150 Call     | 19     | \$8.10     | \$0.00          | \$22,325    | \$80.00    | \$11.75    |
| Equity              | MU Jan '19 70 Call        | 118    | \$2.12     | \$0.00          | \$4,484     | \$10.50    | \$0.38     |
| Equity              | FB Jan '19 260 Call       | 35     | \$2.59     | \$0.00          | \$1,085     | \$20.00    | \$0.31     |
| Equity              | AMD Jan '19 28 Call       | 96     | \$0.40     | \$0.00          | \$73,152    | \$3.90     | \$7.62     |
| Equity              | BCS Jan '19 15 Call       | 574    | \$0.35     | \$0.00          | \$8,610     | \$3.50     | \$0.15     |
| Equity              | DB Jan '19 30 Call        | 670    | \$0.30     | \$0.00          | \$1,340     | \$3.00     | \$0.02     |
| Equity              | CCJ Jan '19 17 Call       | 236    | \$0.41     | \$0.00          | \$2,360     | \$5.00     | \$0.10     |
| Equity              | FCAU Mar '19 24 Call      | 360    | \$0.25     | \$0.00          | \$12,600    | \$2.50     | \$0.35     |
| Equity              | FCAU Jan '19 25 Call      | 108    | \$0.90     | \$0.00          | \$1,620     | \$5.00     | \$0.15     |
| Equity              | JD Jan '19 70 Call        | 108    | \$0.92     | \$0.00          | \$1,512     | \$7.00     | \$0.14     |
| Equity              | TRIP Jan '19 75 Call      | 108    | \$0.89     | \$0.00          | \$1,620     | \$7.00     | \$0.15     |
| Equity              | CHK Jan'19 10 Call        | 750    | \$0.14     | \$0.00          | \$14,250    | \$1.00     | \$0.19     |
| FX                  | UUP Jan'19 27 Call        | 1,230  | \$0.13     | \$0.00          | \$6,150     | \$1.20     | \$0.05     |
| Metals              | Platinum Jan Futures      | 13     | \$817.9    | \$794.00        | \$13,780    | \$920      | \$815.20   |
| Volatility          |                           |        |            |                 |             |            |            |
| Asset Class         | Position                  | Size   | Cost Basis | Risk Point      | Open Risk   | Target     | Last Price |
| Commodity           | GLD Sep 2018 128 Straddle | 24     | \$15.10    | \$0.00          | \$36,240.00 | \$30.00    | \$15.10    |

| Risk Budget   |                        |            |                 |                 |                |
|---------------|------------------------|------------|-----------------|-----------------|----------------|
|               | Total Allowed (In Bps) | Total Used | Total Available | Percentage Used |                |
| Master        | 2500                   | 1,638      | 862             | 65.53%          |                |
| Big Bet Macro | 2250                   | 1520       | 730             | 67.58%          |                |
| Volatility    | 250                    | 118        | 132             | 47.15%          |                |
|               |                        |            |                 |                 | **Updated 9/18 |