

The Consilience Report

The winds and waves are always on the side of the ablest navigators. ~ Edward Gibbon



A Sucker Play, Gets Sucker Pay

The market, we found, was strong and active. My friend, who was quite bullish, was carrying a moderate line purchased several points lower. He began to tell me what an obviously wise thing it was to hold stocks for much higher prices. I wasn't paying enough attention to him to take the trouble to agree with him. I was looking over the quotation board, noting the changes — they were mostly advances — until I came to Union Pacific. I got a feeling that I ought to sell it. I can't tell you more. I just felt like selling it. I asked myself why I should feel like that, and I couldn't find any reason whatsoever for going short of UP.

I stared at the last price on the board until I couldn't see any figures or any board of anything else, for that matter. All I knew was that I wanted to sell Union Pacific and I couldn't find out why I wanted to. ~ "Reminiscences of a Stock Operator"

It was the Spring of 1906, Jesse Livermore and his friend were vacationing in Atlantic City. The market was in a strong bull trend. Union Pacific, a dominant railroad operator in the West, was a market darling of the time. Hardly a bear thesis could stick to the stock.

Livermore's pal, an astute investor himself, thought the Boy Plunger had lost it. Made uncomfortable because he was quite long UP, the friend kept pressing Livermore for an answer why, "What could possibly happen?" he asked.

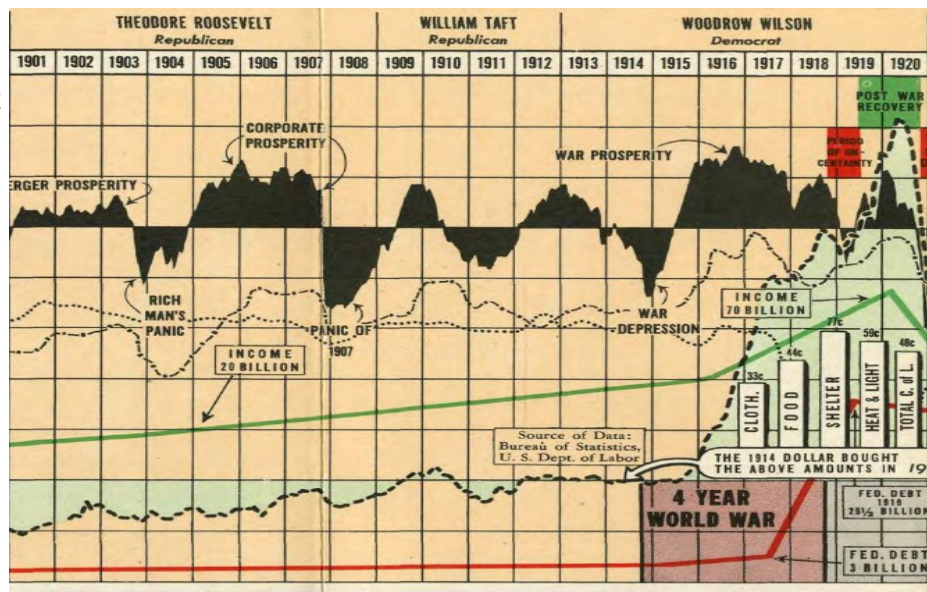
Jesse replied "A million things could happen. But I can't promise you that any of them will. I can't give you any reasons and I can't tell fortunes." To which the friend replied "Then you're crazy... Stark crazy, selling that stock without rime or reason."

A couple of days later, the Great San Francisco Earthquake struck, destroying over 80% of the city, taking a large chunk of UP's business with it.

Livermore made his biggest winnings up to that time in the span of a few days. The real killing however... the one that would make him a **titan of markets**, would come less than a year later.

The turn of the 20th century was a time of big changes and new financial innovations. Increased wealth brought about a new source of investment capital: life insurance companies and Trusts. Both unregulated and poorly understood.

These financial innovations helped drive one of the swiftest market rises in the US's short financial history. The Dow Jones Industrial Average climbed an incredible 137% in the three years since the bottom of the 02'-03' recession.

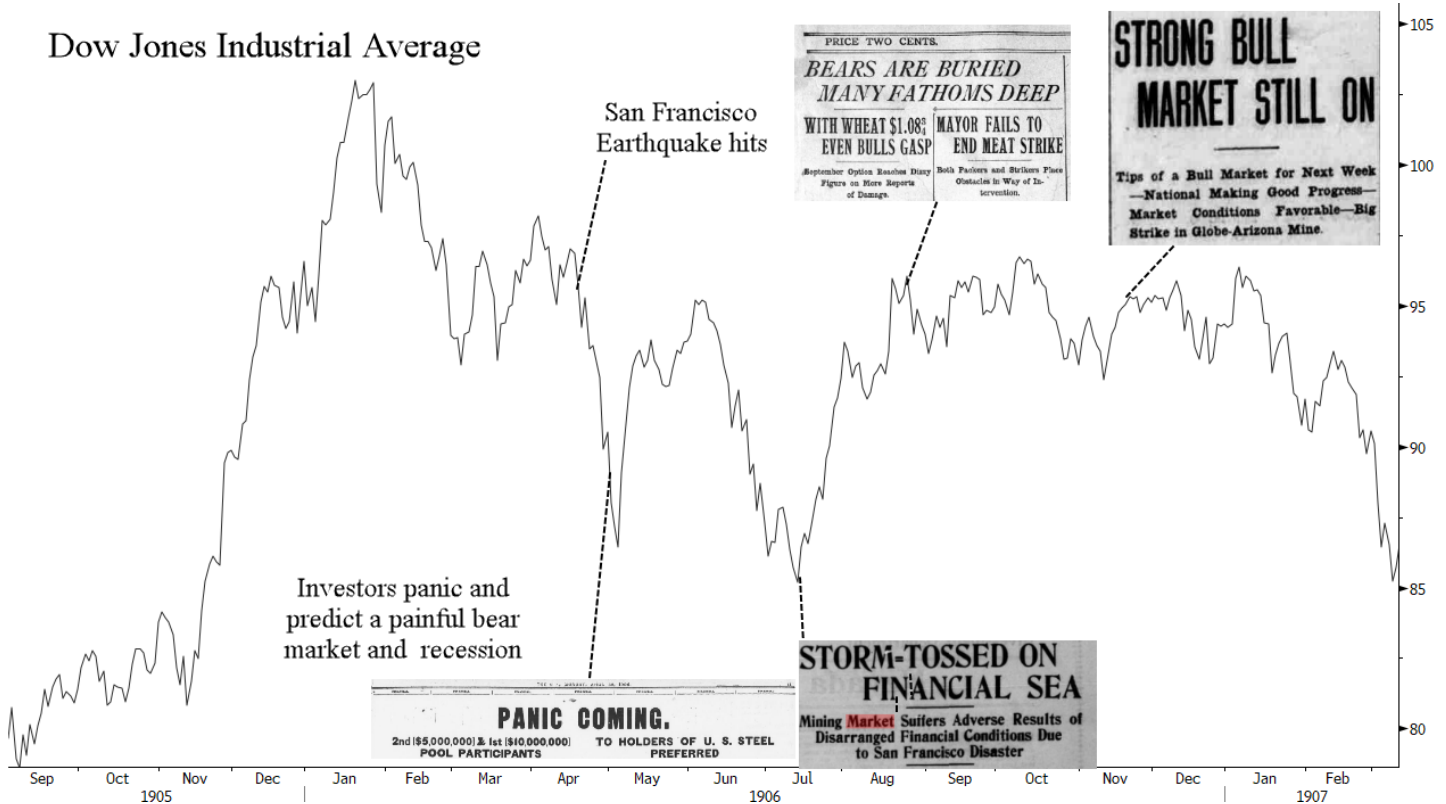


Newspapers wrote about the coming age of “Corporate Prosperity”. New moneyed investors plowed their wealth into securities for the first time, astounded as to how easy the game was.

When the earthquake hit in April, the market had already been in a pullback. The consensus at the time was that it was a healthy retrace; a needed rest after a vertical rise the previous Fall.

Once news hit of the devastation wreaked throughout San Francisco and the surrounding region, the market fell some more, extending the retrace to 18% from peak to trough.

Sentiment soon followed prices and the consensus quickly became one of lugubrious dolor.



But, the structural momentum of the market: **Newton’s First Law and the stubborn drive of cyclical psychology** — powerful forces akin to those that prevent a VLCC Tanker from being able to turn on a dime or perhaps more aptly, the Titanic from hitting an iceberg — were enough to prop the market right back up.

The general mood recovered and the narrative of “crisis averted, all is well” quickly spread. The market jumped 13% from its post earthquake lows right up to a 0.618 retrace of the cycle highs. Newspapers about-faced and began pumping bullish stories once again.

Now, as managers of the extremely profitable Hindsight Capital, we know all-too well that was the wrong take to be pushing in the Fall of 1906. And that the following Spring would bring one of the worst global financial panics of that time.

But what was the final straw, the coup de grace, the match in the powder barrel that would reverse the boom years and send the global economy spiraling?

Was it really just an earthquake in a single city?

Yes... and no.

Like all financial crises, there is no one single cause... nothing in economics is ever so neat. But the ingredients were there that are present in nearly all crashes: broad speculation, credit boom driven asset inflation (read: high valuations), and a *gigantic liquidity shock*...

Many people wrongly point to the Trusts as the antecedent... The crisis was named after the Knickerbocker Trust after all. These were shadow banks of a sort and they did create a point of fragility in the system. Though, they weren't the trigger. Others point to the Heinze brothers miscalculated attempt to corner the market on United Copper stock, which ended in spectacular failure and led to a run on the financial institutions associated with the duo. This may have been the match but it wasn't the powder keg.

No... The tinderbox was the large amounts of liquidity that were pulled from the economy due to events that transpired nearly a year prior.

Remember how the earthquake leveled over 80% of San Francisco city? Well, the majority of those rubble piles (once buildings) were insured. This meant that the insurers who were on the hook for a large sum of claims, had to raise cash. Lots and lots of cash... Most of these insurers were located on the East Coast and in the UK.

So, these insurance companies transferred their money from the major financial institutions in NYC, Boston, and London, out to the West coast in order to pay out claimants — remember, this is well before the time of bits and bytes so when we're talking money being moved we're talking truck loads of gold bars.

Moving liquidity of this size tends to cause waves... The Bank of England noticed its gold reserves were rapidly depleting so it tightened rates in order to stem the flow. East coast banks soon followed suit. This led to tightening monetary conditions which was then compounded by the seasonal surge in demand from farmers needing financing for the shipment of their crops eastward, as they always did during that time of year.

Call money rates jumped in response.

Yet, the market grinded sideways.

The Pavlovian response that'd been created over the prior four years; rewarding those who bought and punishing those who sold. Effectuated a kind of structural stubbornness which precluded the market from recognizing a new paradigm was afoot. This was helped along by the fact that on a purely numbers basis, companies look best at the cycle top. They have the cash available to plug holes and massage declining numbers — at least for a time.

One speculator though was privy to the broad change in general conditions. That of course was our Boy Plunger. Livermore explains his thinking of that time:

I studied the situation in 1906 and I thought that the money outlook was particularly serious. Much actual wealth the world over had been destroyed. Everybody must sooner or later feel the pinch, and therefore nobody would be in position to help anybody. It would not be the kind of hard times that comes from the swapping of a house worth ten thousand dollars for a carload of race horses worth eight thousand dollars. It was the complete destruction of the house by fire and of most of the horses by a railroad wreck. It was good hard cash that went up in cannon smoke in the Boer War, and the millions spent for feeding non-producing soldiers in South Africa meant no help from British investors as in the past.

Also, the earthquake and the fire in San Francisco and other disasters touched everybody — manufacturers, farmers, merchants, labourers and millionaires. The railroads must suffer greatly. I figured that nothing could stave off one peach of a smash. Such being the case there was but one thing to do — sell stocks!

Unfortunately for him, he came to this conclusion in the Fall of 1906. The market panic that he so correctly foresaw wouldn't begin for another 6-months, approximately 10-months after the Great Earthquake.

As a result, Jesse suffered death by a thousand cuts over the resuming months. The market would break, he'd plunge, and stocks would reverse back to highs. Over and over again... This back and forth nearly cost him his shirt.

He talks about that time and the valuable lesson he learned, saying:

I was nearly twenty-seven years old. I had been at the game twelve years. But the first time I traded because of a crisis that was still to come I found that I had been using a telescope. Between my first glimpse of the storm cloud and the time for cashing in on the big break the stretch was evidently so much greater than I had thought that I began to wonder whether I really saw what I thought I saw so clearly. We had had many warnings and sensational ascensions in call-money rates. Still some of the great financiers talked hopefully — at least to newspaper reporters — and the ensuing rallies in the stock market gave the lie to the calamity howlers.

...Thinking about the reward for my excellent sight kept me from considering the distance to the dollar-heap. I should have walked and not sprinted... I didn't wait to determine whether or not the time was right for plunging on the bear side. On the one occasion when I should have invoked the aid of my tape-reading I didn't do it. That is how I came to learn that even when one is properly bearish at the very beginning of a bear market it is well not to begin selling in bulk until there is no danger of the engine back-firing.

With knowledge gained, Livermore patiently waited for the market to signal the time had come to plunge. That moment came in early 1907. With call-money rates shooting to the moon and market stalwarts desperately trying to raise money, the tape finally showed the wobbly knees Livermore had been waiting for.

He cleaned up and cleaned up good. **The Boy Plunger pulled \$3 million from markets that year (which equates to \$84 million in today's money).** Not too shabby for a 27 year old former bucket shop hackey.

In addition to the riches, Livermore said the real earnings that year were in wisdom... wisdom that would make him wealthy many times over. He said:

At first, my foresight broke me. But now I was right and prospering. However, the real joy was in the consciousness that as a trader I was at last on the right track. I still had much to learn but I knew what to do. No more floundering, no more half-right methods. Tape reading was an important part of the game; so was beginning at the right time; so was sticking to your position. But my greatest discovery was that a man must study general conditions, to size them so as to be able to anticipate probabilities. In short, I had learned that I had to work for my money. I was no longer betting blindly or concerned with mastering the technique of the game, but with earning my successes by hard study and clear thinking. I also had found out that nobody was immune from the danger of making sucker plays. And for a sucker play a man gets sucker pay; for the paymaster is on the job and never loses the pay envelope that is coming to you.

The bear market and the ensuing financial crisis were eventually put to a stop by the extraordinary actions taken by a consortium of bankers along with the US Treasury. The group was led by none other than JP Morgan — a man often referred to as a “one man central bank” due to his authority over the financial system.

Morgan pressed the men to commit a total of 50 million dollars to the financial system in order to stem the run on banks and stave off the collapse. \$25m came from the Treasury and \$25m from the bankers.

These actions occurred on October 24. The bear market ended three weeks later on November 15th, 1907.

This episode would lead to the creation of the Federal Reserve a few years later.



Unrolled for understanding

The late historian, Will Durant once said “The present is the past rolled up for action, and the past is the present unrolled for understanding.” Earthquakes, Knickerbockers, the late great Livermore, and first financial crisis of the 20th century offer up some salient takeaways for us to unroll in the era of Covid-19. Let’s run through some of them.

Market tops / bear markets are processes, not events.

Livermore nearly blew his stack shorting a market that refused to budge. He correctly assessed the general conditions, he could see that the tide was going out, but he didn’t wait for the tape to confirm that the regime had changed and there was no longer a risk of the “engine backfiring”.

Cyclical momentum is more than just the directional tailwind that shows up in stock prices. It’s a deep substrate that forms over the cycle and is composed of incentive and behavioral structures as well as belief and narrative networks which comprise numerous feedback loops that all coalesce to form a system that exists to self-perpetuate.

This is why bull markets don’t die easy. It’s why market cycles don’t turn on a dime. It’s why the average market top takes 10-months to play out. And it’s why the average bear market goes on for 15-months.

It’s also why bear markets are characterized by large volatile counter swings making them incredibly hard to trade. The cyclical momentum from the bull market keeps trying to reassert itself.

It’s why the 1907 crash started nearly a year after the liquidity event (the earthquake) that caused it. It’s why the 08’ financial crisis started nearly two years after home prices peaked. It’s also why we could very well chop sideways for the rest of the year before the real bear market begins in earnest — if, in fact, a bear market is in our cards.

Table 2: NBER Recessions & S&P 500 price performance (Secular bull market periods for the S&P 500 highlighted)

| Recession start | Recession end | Length (months) | Time between recessions (years) | SPX peak | SPX low | A-D line bearish divergence at peak | Length SPX correction (months) | % drop | SPX peak vs start of recession (months) | SPX trough vs end of recession (months) |
|-----------------|----------------|-----------------|---------------------------------|------------------|------------------|-------------------------------------|--------------------------------|---------------|---|---|
| Sep-29 | Mar-33 | 44 | | 16-Sep-29 | 01-Jun-32 | Yes | 33.0 | 86.19% | 0.5 | -10.1 |
| Jun-37 | Jun-38 | 13 | 4.2 | 10-Mar-37 | 31-Mar-38 | Yes | 12.9 | 54.47% | -2.8 | -3.0 |
| Mar-45 | Oct-45 | 8 | 6.7 | No drop | SPX rallied | No | | 0.00% | | |
| Dec-48 | Oct-49 | 11 | 3.1 | 15-Jun-48 | 13-Jun-49 | Yes | 12.1 | 20.57% | -5.6 | -4.7 |
| Aug-53 | May-54 | 10 | 3.8 | 05-Jan-53 | 14-Sep-53 | No | 8.4 | 14.82% | -6.9 | -8.6 |
| Sep-57 | Apr-58 | 8 | 3.3 | 02-Aug-56 | 22-Oct-57 | Yes | 14.9 | 21.63% | -13.2 | -6.3 |
| May-60 | Feb-61 | 10 | 2.0 | 03-Aug-59 | 25-Oct-60 | Yes | 15.0 | 13.85% | -9.1 | -4.2 |
| Jan-70 | Nov-70 | 11 | 8.8 | 29-Nov-68 | 26-May-70 | Yes | 18.1 | 36.06% | -13.3 | -6.3 |
| Dec-73 | Mar-75 | 16 | 3.0 | 11-Jan-73 | 03-Oct-74 | Yes | 21.0 | 48.20% | -10.8 | -6.0 |
| Jan-80 | Jul-80 | 7 | 4.8 | 13-Feb-80 | 27-Mar-80 | Yes | 1.4 | 17.07% | 1.4 | -4.2 |
| Jul-81 | Nov-82 | 17 | 0.9 | 28-Nov-80 | 12-Aug-82 | Yes | 20.7 | 27.11% | -7.2 | -3.7 |
| Jul-90 | Mar-91 | 9 | 7.6 | 16-Jul-90 | 11-Oct-90 | Yes | 2.9 | 19.92% | 0.5 | -5.7 |
| Mar-01 | Nov-01 | 9 | 9.9 | 24-Mar-00 | 21-Sep-01 | Yes | 18.2 | 36.77% | -11.4 | -2.3 |
| Dec-07 | Jun-09 | 19 | 6.0 | 09-Oct-07 | 09-Mar-09 | Yes | 17.2 | 56.78% | -1.8 | -3.8 |
| | Average | 13.8 | 4.9 | | | Average | 14.6 | 31.71% | -6.1 | -5.3 |
| | Median | 10.6 | 4.2 | | | Median | 14.9 | 22.18% | -6.9 | -4.7 |
| | Minimum | 7.1 | 0.9 | | | Minimum | 1.4 | 0.00% | -13.3 | -10.1 |
| | Maximum | 43.6 | 9.9 | | | Maximum | 33.0 | 86.19% | 1.4 | -2.3 |

Source: BofA Merrill Lynch Global Research, Bloomberg, NBER

Fractals and liquidity...

People get all excited about price movements, but they completely misunderstand that there is a bigger picture in which those movements happen. Price movements only have meaning in the context of the fundamental landscape. To use a sailing analogy, the wind matters, but the tide matters, too. If you don't know what the tide is, and you plan everything just based on the wind, you are going to end up crashing into the rocks. That is how I see fundamentals and technicals. You need to pay attention to both to make a sense of the journey. ~ Colm O'Shea

The economy is fractal.

That probably sounds like an unnecessarily obtuse statement. Here's what it means.

The economy is a complex system where the micro informs the macro. It's a composite of self-similar micro components that aggregate to form the whole. Throughout a bull cycle, the aggregate grows while various sub-components compete, creating some winners and some losers. But, the system as a whole can grow because there's **enough energy (liquidity)** coming into the system to keep it expanding even while some of its parts shrink.

But when there's a systemic shock. A liquidity event that's large enough to loop through the system. There's suddenly no longer enough energy to keep the system expanding while a number of its components contract. This is where the feedback loops that once worked in the economy's favor, begin to work against it.

In practical terms, this is what that it looks like.

A commercial real estate company is hit with hard times. They're seeing falling occupancies and less demand for their new projects. So they need to reduce costs and prepare the ship to weather a storm. Maybe they start by trimming the fat. Get rid of catered lunches. Downsize the office space. And cut away redundancies where possible.

But, this isn't enough. So they cut their workforce by 15%. Slash operating expenses by canceling unneeded software licenses and perhaps ask for extensions on some accounts payable with a few of their vendors.

This strengthens their financial position but here's how their actions ripple throughout the system.

No more catered lunches means the caterer also lays off some of their workforce and begins cutting back on inventory. This, in turn, hurts their suppliers. The produce companies, the delivery people, the truck drivers, the software subscription providers and so on and so forth...

This eventually ripples back to the commercial real estate company who now sees more missed rent payments and even less demand for their office space. So they're forced to further cut costs. Higher unemployment means lower consumption and falling demand which leads to rising business failures and missed loan payments. This forces banks to raise funding costs causing **liquidity to tighten when businesses need it most.**

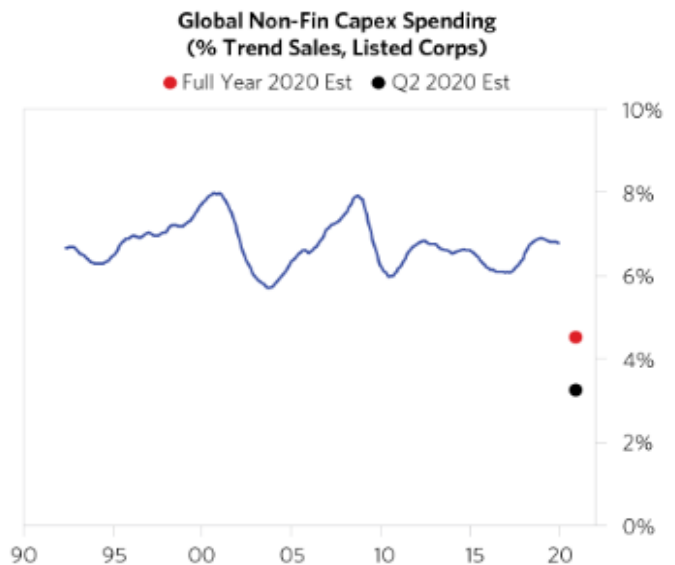
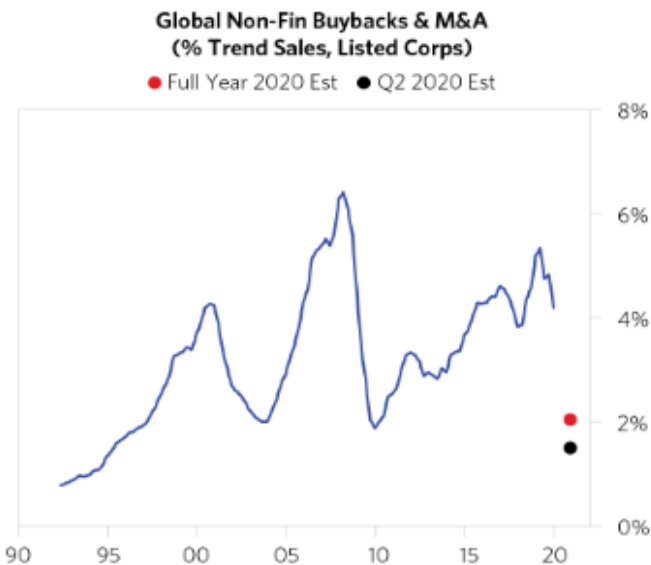
What this means is that in a fractal system such as our economy, what occurs at $t + 0$ for one subsection doesn't happen until $t + 1$ for another and $t + 2$ for another and on and on.

This is why there's *always* a lag between the shock and the turn. It takes time to ripple outwards. And this is to say nothing of the mass psychological effects that also eventually entrench within the consumer when a shock like this occurs.

Shock vs. Policy Cure

Bridgewater, a hedge fund, estimates a \$4 trillion hit to US company revenues over the course of the year. Globally, they're expecting \$6 trillion in cuts to corporate spending on labor and capex and \$1 trillion in cuts to financial spending. Even with these cuts, a "large number of companies will still face significant capital needs (totaling 1.5trn)." And this is just the base case. The "bad case could be easily double this."

Bridgewater writes that "The corporate losses have caused a domino effect as companies try to survive the global shutdown. The size of the hit is unprecedented (we estimate about \$20 trillion). Some of the hit will be taken on incomes, some on the balance sheets of households, corporations, central banks, and governments. Who takes the losses and how will determine how easily economies can emerge from this shock."



These incredibly large numbers need to be looked at in a [Levy-Kalecki framework](#), where one company's capital spending is another's profits. This is what creates the slow moving train wreck that we're all now party to... the real impact of the last few months of lost business won't become known until at least the second half of this year. And that's saying nothing of the continuation of the virus' impact on the global economy.

On the flip side of this we have a global policy, both fiscal and monetary, that has been absolutely unprecedented.

Exhibit 2: Summary of G4 and BRIC fiscal and monetary measures

| Country | Monetary Measures | | | Fiscal Measures (USD bn) | Quasi-fiscal Measures |
|-----------|--|-------------------------|--|------------------------------|---|
| | Policy Rate Cuts | Balance Sheet Expansion | Other Liquidity Measures Announced | | |
| US | 150bps | ~USD7800bn* | <ul style="list-style-type: none"> Extended repo offering Discount window borrowing rate lowered Extended dollar liquidity swap lines with CBIs Commercial Paper Funding Facility (CPFF) Primary Dealer Credit Facility (PDCF) Money Market Mutual Fund Liquidity Facility (MMMF) Primary Market Corporate Credit Facility (PMCCF) & Secondary Market Corporate Credit Facility (SMCCF) - USD750bn Term Asset-Backed Securities Loan Facility (TALF) - USD100bn Foreign and International Monetary Authorities (FIMA) Repo Facility Main Street Business Lending Program - USD600bn Municipal Liquidity Facility - USD600bn Paycheck Protection Program - USD660bn Paycheck Protection Program Lending Facility (PPPLF) | 2442 | <ul style="list-style-type: none"> Treasury capacity for loans and Federal Reserve support as loan guarantees of \$450bn (in CARES act) The provision of USD85bn in credit protection to Fed's PMCCF, SMCCF and TALF programs CPFF, MMLF credit protection of USD10bn each |
| Euro Area | - | ~EUR2700bn (-USD3400bn) | <ul style="list-style-type: none"> Additional temporary LTROs (demand driven with full allotment) Changes to the terms of TLTRO III (total amount that counterparties will be entitled to borrow raised from 30% to 50% of their stock of eligible loans) - ~USD 1.1tn USD liquidity provision Capital relief - ~USD2tn Suspension of banks' dividends until October - ~USD33bn Easing of collateral requirements | 287(excluding member states) | <ul style="list-style-type: none"> The Europe Investment Bank to guarantee ~EUR200bn of loans. Support for the Commission's EUR100bn unemployment re-insurance scheme (SURE), which backs national unemployment and partial activity schemes |
| Germany | - | - | - | 178 | EUR600bn economic stabilisation fund |
| France | - | - | - | 121 | EUR300bn in loan guarantee |
| Italy | - | - | - | 32 | EUR740bn in loan guarantee |
| Spain | - | - | - | 23 | EUR200bn in loan guarantee |
| Japan | - | ~JPY62tn (-USD609bn) | <ul style="list-style-type: none"> Special funds-supplying operations to facilitate corporate financing regarding the novel coronavirus - ~USD75bn Additional purchases of CP and Corporate bonds - USD186bn USD liquidity supply (U.S. dollar funds-supplying operations against pooled collateral and Securities lending) | 261 | JPY10.1tn from fiscal investment and loans (FILP) |
| UK | 65bps | GBP620bn (USD940bn) | <ul style="list-style-type: none"> Covid Corporate Financing Facility (CCFF) Contingent Repo Facility USD repo operations Ways and Means Facility expanded to an undisclosed amount | 145 | GBP330bn in loan guarantee |
| China | 30bps (7-day repo rate) 50-100bps (RRR) | - | <ul style="list-style-type: none"> Special PBoC relending for virus containment - USD43bn Special PBoC relending and re-discounting to support production resumption - USD71bn PBoC relending and re-discounting for supporting SMEs - USD143bn Policy bank loans to support SMEs - USD50bn | 159 | Various measures including policy bank loans, local government bond issuance etc. |
| India | 75bps | - | <ul style="list-style-type: none"> Targeted LTRO of up to three years tenor - USD13.3bn Cash Reserve Ratio reduced by 1% pts - USD18.2bn Under MSF, banks can now borrow an additional 3% of NDTL (vs 2% earlier) - USD18.2bn Targeted LTRO 2.0 - USD6.7bn Refinance facilities to NABARD, SIDBI and NHB - USD6.7bn Special Liquidity Facility for Mutual Funds - USD6.7bn | 22 | - |
| Brazil | 50bps | - | <ul style="list-style-type: none"> Total of BRL1.2tn liquidity measures including RRR on time deposits reduced from 25% to 17%, reduction of the spread of liquidity-leveling operations from 65 bps to 10 bps, etc. - USD235bn | - | - |
| Russia | 75bps | - | <ul style="list-style-type: none"> Two repo fine-tuning auctions of RUB500bn each - ~USD13bn | 40 | - |

Source: National source, various news websites, Morgan Stanley Research. *The Fed's balance sheet expansion of ~\$7800bn is Morgan Stanley Research expectation based on the total Fed balance sheet of 2021.



This is creating some pretty bizarro realities. For instance, here in the US we now have over 30 million people out of work. But... because of the boost to unemployment payments and the stimulus checks, we're going to see **personal income go up, not down**. This is because the bottom 50% of workers are now making more money than they did when they were employed.

Considering all of the above, we need to remain wary of any strong opinions that are based off a couple weeks of price action and a few economic data points. Now more than ever there's likely to be a lot of noise in the data and in the tape.

Eventually, the Game Masters (policy makers) will get the liquidity equation right just like JP Morgan and his coterie of bankers did in 1907, which ended the bear market a few weeks later. I suspect we're still a ways from finding that sweet spot. It's likely going to take more volatility to motivate policy makers to get there.

Follow the signposts...

Three things need to happen in order for a major bottom in US stocks to be in.

1. Financial conditions need to ease and revert back towards their pre-crisis levels.

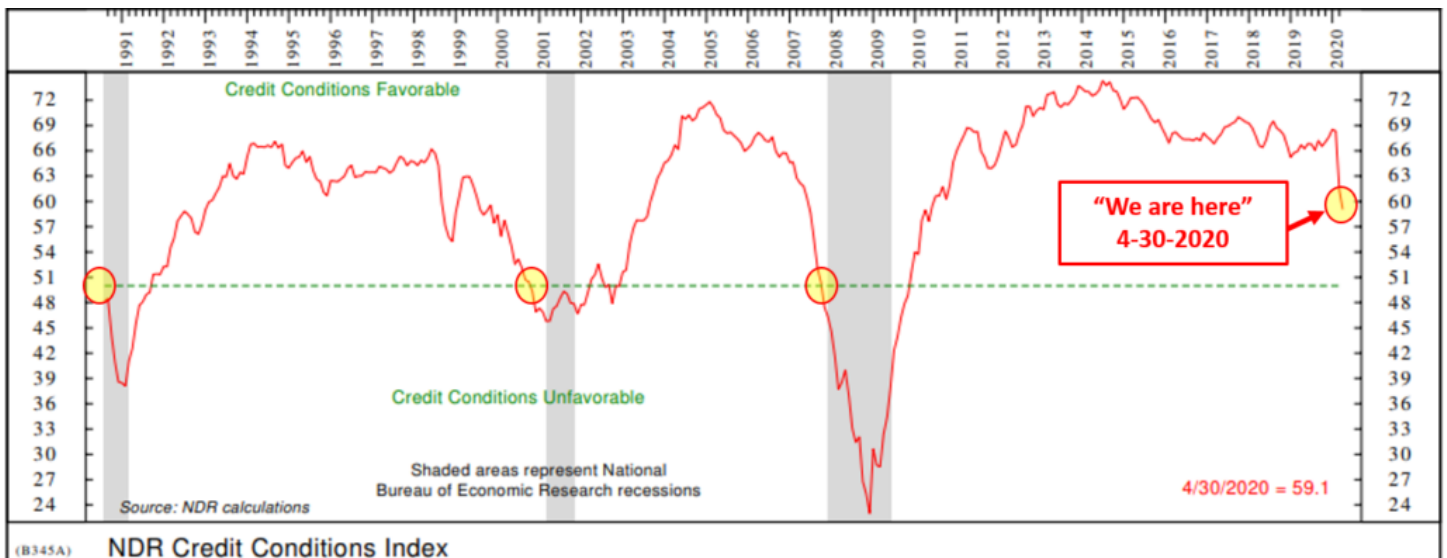
Red = recessions



Chicago Adjusted Financial Conditions Index (ANFCI)

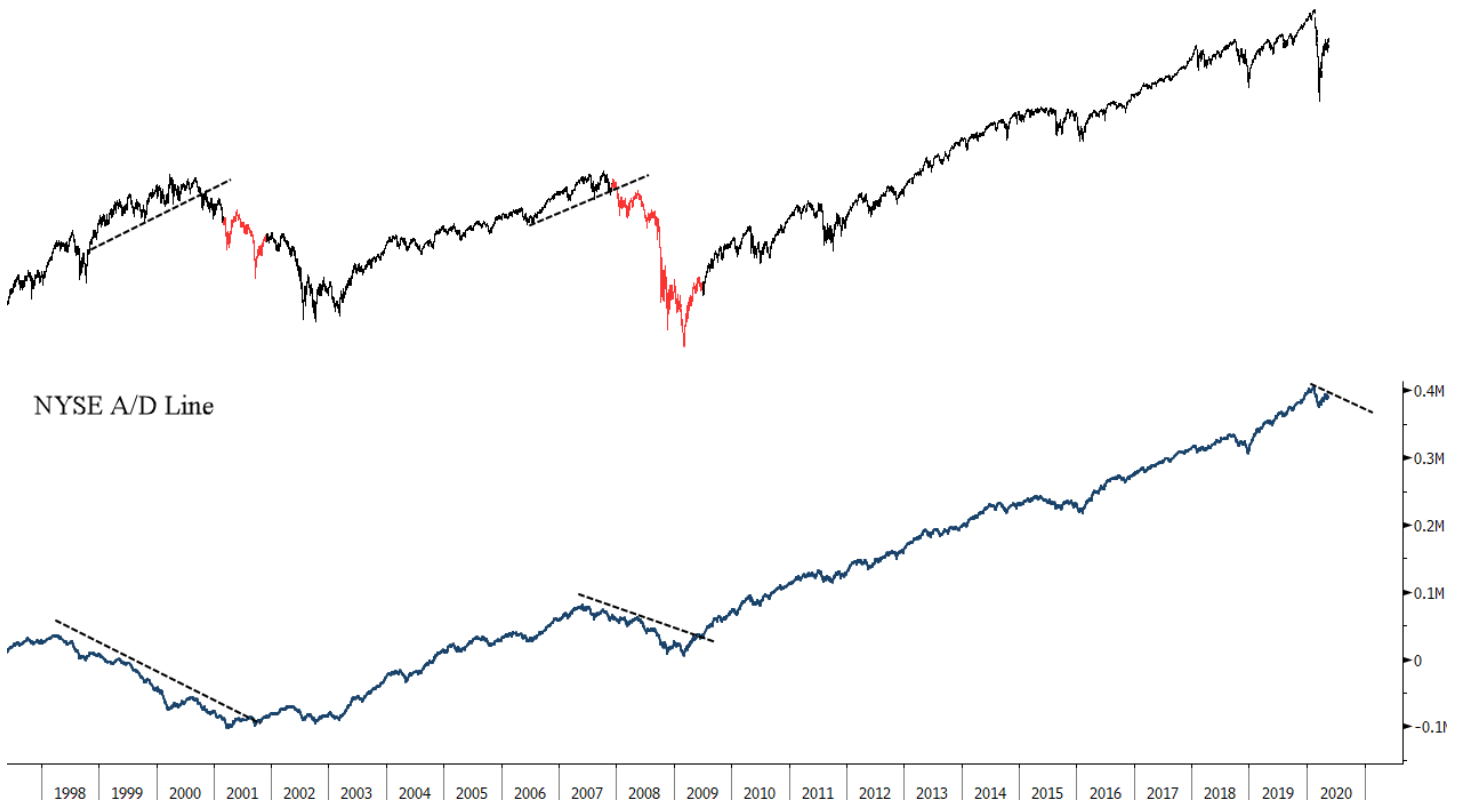


Even considering the substantial policy measures taken to date, it's likely we'll see credit conditions continue to deteriorate. If that's the case, expect equities to follow suit.

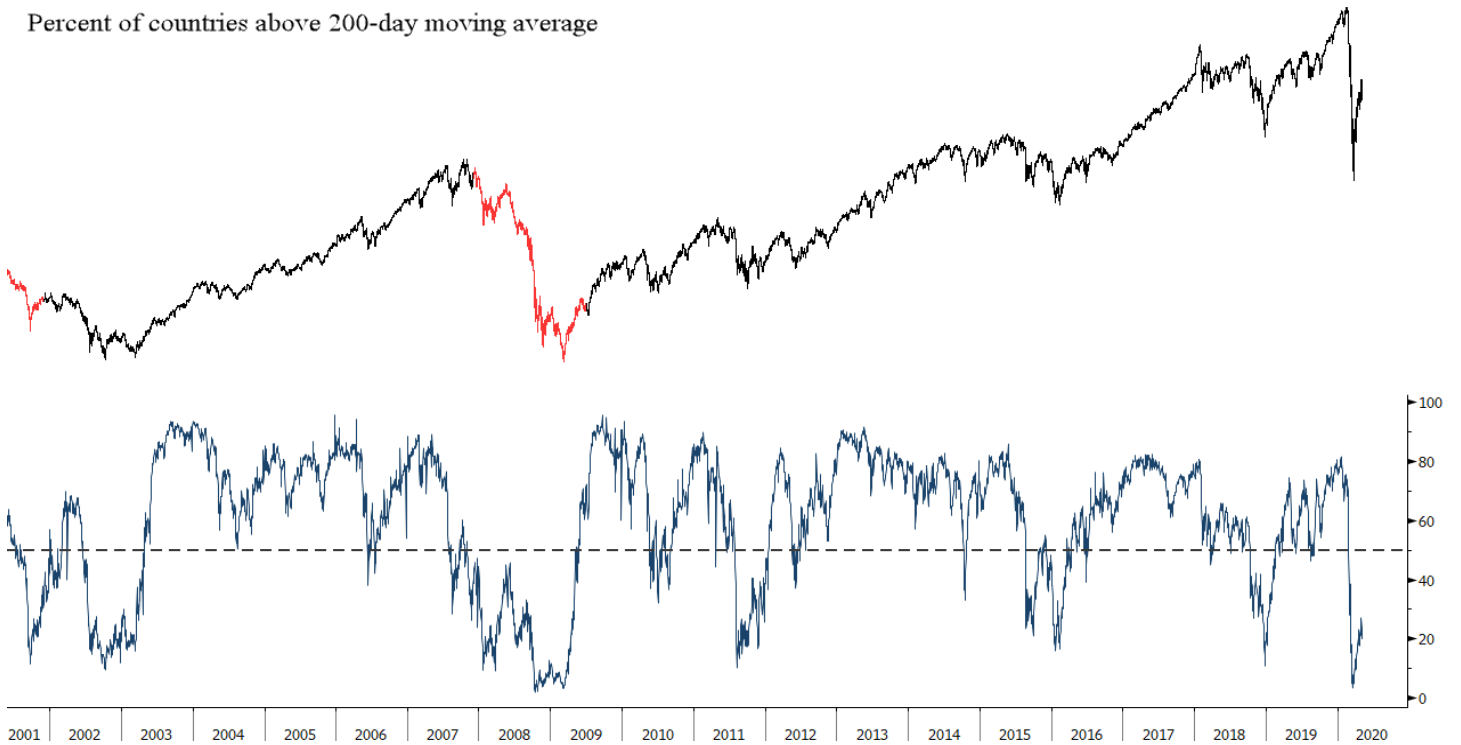


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2. US market breadth has been declining now for a couple of months. Negative divergences between the market and A/D line that persist for over a few months almost always precede a bear market. If a bottom is in fact in on the US market, we need to see breadth begin to improve and confirm the trend higher in the market.



3. Global participation remains weak. The percentage of countries trading above their 200-day moving averages is only around 20%. Participation has failed to bounce back as much as market prices. You need broad-based participation to confirm the start of a new major bull leg and we're not yet seeing that. We want to see this cross above 50% (dotted midline).



Until we see notable improvements or deterioration in the above, we should expect a continuation of the sideways trading range that US stocks have been in for the last 30-months.

So, really, the main takeaway from this entire report is to keep your risk budget tight, shorten your timeframe, and wait for the tape and general conditions to line up and provide a signal. Until then, making high conviction macro call and plunging aggressively is really just a sucker play. And as the Boy Plunger pointed out, “A sucker play, gets sucker pay.”



Natural Gas: Looking for survivors amongst the ruins...

The bull case for select natural gas stocks is simple.

- ◆ Natural gas prices have been declining for 15-years and are down 88% from their 2005 highs
- ◆ The industry has zero interest from investors and is mostly shut out of capital markets
- ◆ The cure for lower prices is lower prices and the [Capital Cycle](#) will continue to drive out unprofitable producers over the next 1-2 years
- ◆ Meanwhile, a handful of companies are well positioned to weather the storm and ride out the trough of the cycle
- ◆ Demand for natural gas is growing at a healthy clip, increasing more than 30% over the last decade, which is 3x faster than the decade prior
- ◆ The bear market has been caused by too much supply. This supply glut will be worked through over the next 12-18 months

Low prices and thrice burned capital markets are forcing producers to dramatically reduce capex spend.

Bloomberg Bloomberg Intelligence

| Ticker | Name | Capex 2020 \$ Mln (Orig) | Capex 2020 \$ Mln (Revised) |
|----------------|--------------------------------|--------------------------|-----------------------------|
| AR US Equity | Antero Resources Corp | -1,200.0 | -1,076.6 |
| APA US Equity | Apache Corp | -1,750.0 | -1,100.0 |
| COG US Equity | Cabot Oil & Gas Corp | -575.0 | -573.0 |
| CPE US Equity | Callon Petroleum Co | -975.0 | -712.5 |
| CNQ CN Equity | Canadian Natural Resources Ltd | -3,950.0 | -2960.0 |
| CHK US Equity | Chesapeake Energy Corp | -1,475.0 | -1,416.0 |
| XEC US Equity | Cimarex Energy Co | -1,300.0 | -717.5 |
| CXO US Equity | Concho Resources Inc | -2,700.0 | -2000.00 |
| COP US Equity | ConocoPhillips | -6,600.0 | -5900.0 |
| CLR US Equity | Continental Resources Inc/OK | -2,650.0 | -1200.0 |
| DVN US Equity | Devon Energy Corp | -1,775.0 | -1,300.0 |
| FANG US Equity | Diamondback Energy Inc | -2,900.0 | -1700.0 |
| EOG US Equity | EOG Resources Inc | -6,500.0 | -4,500.0 |
| EQT US Equity | EQT Corp | -1,200.0 | -1,125.0 |
| HES US Equity | Hess Corp | -3,000.0 | -2200.0 |
| MRO US Equity | Marathon Oil Corp | -2,400.0 | -1,900.0 |
| MUR US Equity | Murphy Oil Corp | -1,450.0 | -950.0 |
| NBL US Equity | Noble Energy Inc | -1,700.0 | -1,200.0 |
| OXY US Equity | Occidental Petroleum Corp | -5,400.0 | -3,600.0 |
| PE US Equity | Parsley Energy Inc | -1,700.0 | -1000.0 |
| PXD US Equity | Pioneer Natural Resources Co | -3,150.0 | -1800.0 |
| RRC US Equity | Range Resources Corp | -520.0 | -504.2 |
| SM US Equity | SM Energy Co | -837.5 | -818.2 |
| SWN US Equity | Southwestern Energy Co | -900.0 | -920.6 |
| WPX US Equity | WPX Energy Inc | -1,737.5 | -1337.5 |
| | | -\$58,345.0 | -\$42,511.1 |

Goehring & Rozenchwajg (G&R), a commodity focused hedge fund, pointed out in a recent report that “The Marcellus has gone from nothing to representing 25% of total US dry gas supply in only 10 years; if the field were to unexpectedly stop growing and decline it would have massive repercussions” which is exactly what’s happening. “Production has now declined steadily for the last four months by 1bcf/d in total or 15% on an annualized basis.”

Falling production is due not only to lower capex spend which equates to less rigs being operated but also due to geological depletion problems. G&R again writes “the last time 50 rigs turned in the Appalachian basins (in mid-2016), basin production was still able to grow by 200 mmcf/d each month. Today, that same rig count can no longer offset base depletion, resulting in monthly production declines of 300 mmcf/d.”

The [Capital Cycle](#) and well depletion issues will help turn the cycle in natural gas, eventually. However, over the short-term, the drop in demand due to Covid-19 combined with high inventory levels will keep a lid on prices.

But, as we’ll show, there are a number of gas E&Ps that have either hedged most of their forward book for this year and much of next and which have incredibly low cash operating costs.

2020 Hedging Statistics for Natural Gas E&Ps

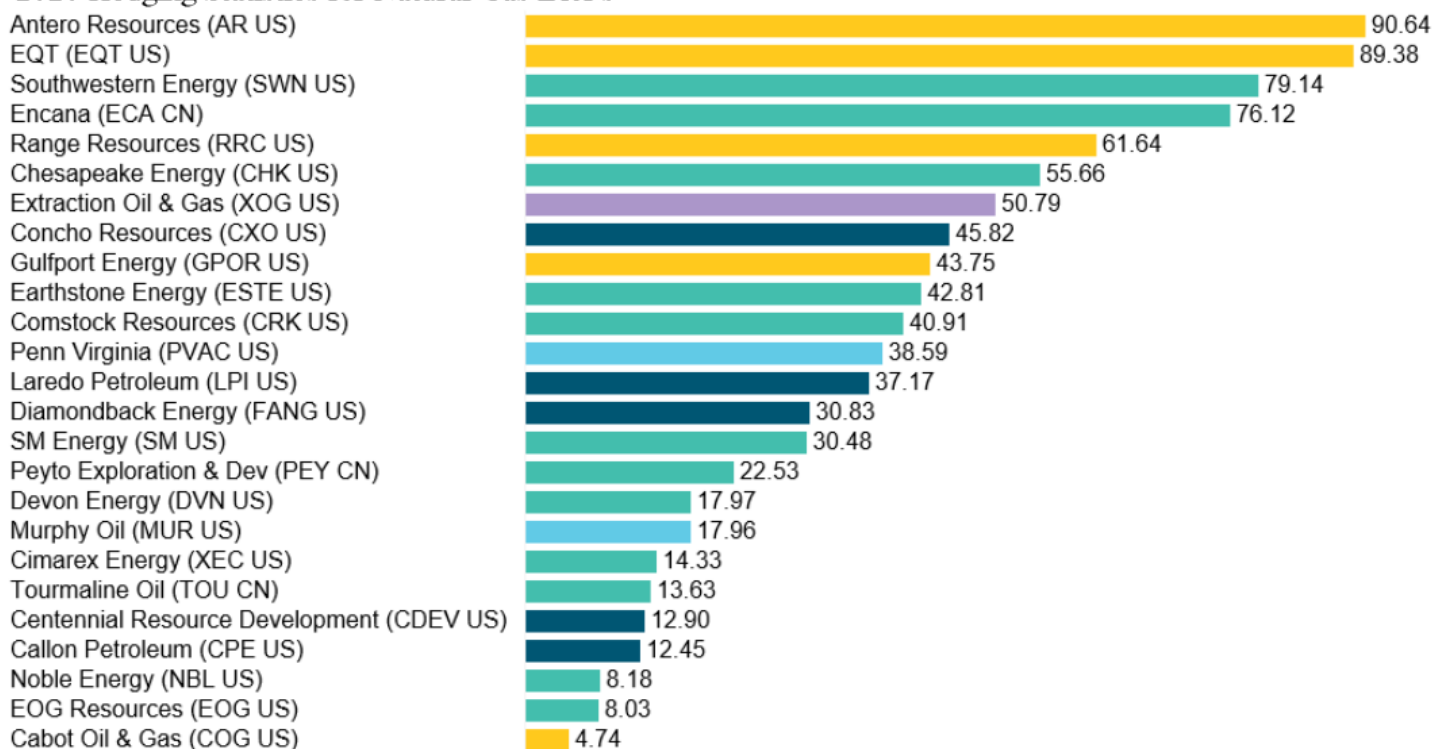
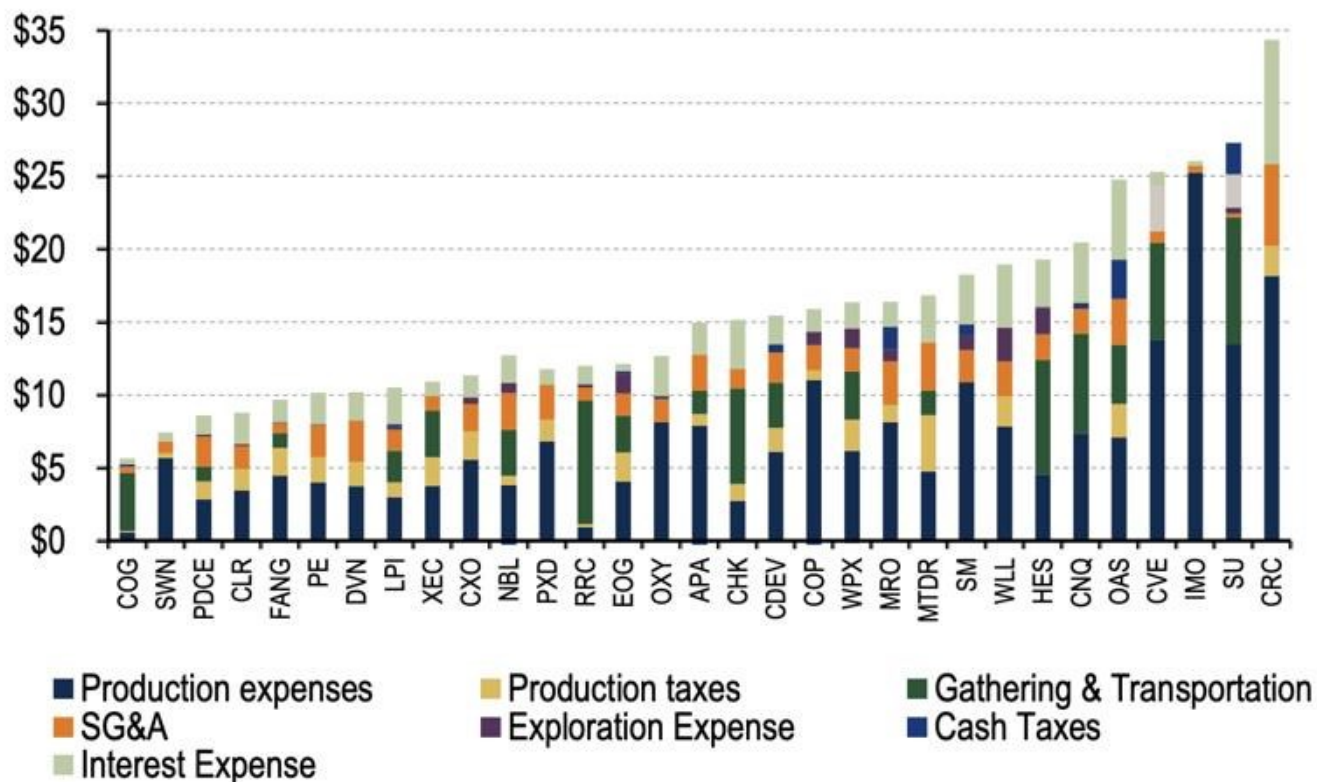


Chart 3: Cash opex including corporate for US and Canadian oils



Source: BofA Global Research

@MacroOps

Now I'm going to pass things off to Brandon so he can walk you through the value he's seeing in the gas E&P space. - Alex

How To Value Energy Oil & Gas Companies

Give a man a fish, he feeds for a day. Don't teach a man how to fish -- and feed yourself. He's a grown man, and fishing's not that hard. ~ Ron Swanson

Unlike Ron Swanson, we want the Consilience Report to both feed and teach its readers. We're bullish on the natural gas industry. In turn, we've got a few ways to play that trend. But before we do that, let's dive into the nuances of valuing these oil and gas companies.

Not all O&G companies are created equal. There's different segments, each with its own unique twist on valuation. Its own main drivers. Mistake these differences and you could miss an incredible bargain. Or worse, mistake an overvalued stock for a deal.

There's five main differences between "regular" businesses and O&G companies:

1. Can't Control Revenues / Prices

As we'll see, many O&G companies are at the mercy of the underlying commodity spot price. Energy companies can hedge their commodity exposure via the futures market. But its rare to find companies completely hedged on a few years of production.

2. Balance Sheet Matters Most

No surprise here, energy companies can't control their top-line revenue. So, balance sheet strength is of highest priority. The main reason for this prioritization is **reserves**, which we'll discuss later.

3. Different Accounting

Investors will see a few different metrics on energy company income statements like full cost and successful efforts, or exploration/depletion.

4. Assets Deplete Fast

Energy companies have nuanced accounting that investors don't see in other companies. Assets are a perfect example. For nearly every other company, your assets increase as your business expands. Energy is different. The bulk of their assets lie in reserves, which they need to deplete to generate revenue. Over time, energy companies' assets should decline.

5. Highly Cyclical

Energy companies follow their underlying commodity. If oil prices are high -- oil-related companies print money. This is the power of commodity leverage. Most of those commodity price increases drop straight to the bottom line in free cash flow.

Step 1: Understand The 3 Segments

There's three segments within the oil and gas industry:

1. Upstream
2. Midstream
3. Downstream

Upstream is commonly referred to as “E&P”. These are the companies that explore, dig, recover and produce oil and gas. These companies drill wells and scour the Earth for oil. Examples of E&P companies include ExxonMobil, BP and Royal Dutch Shell.

Midstream companies collect the gas and/or oil that E&P’s produce and send it to a processing plant. These are the companies that make the pipelines running from the oil wells to their processing facilities. The facilities then separate the oil and gas into various end-products (such as natural gas liquids, ethane, butane, etc.). Examples of Midstream companies include Kinder Morgan and Transcanada Corporation.

Downstream is the final cog in this giant O&G machine. Downstream companies refine the oil and gas. From there, they sell it and/or distribute the products to its end customers. There’s myriad businesses within the downstream sector:

- Refineries
- Petrochemical plants
- Retail outlets
- Natural gas distribution centers

Specific company examples include Valero Energy, Sunoco, Citgo, etc. I know I said there’s three main segments in oil and gas -- but there’s *really* four: **Oilfield Services**

Oilfield service companies are responsible for providing drilling, cementing, surveying and treating the upstream producers. An example of an oilfield service is fracking. Companies include Halliburton, Schlumberger, etc.

Step 2: Understand The Valuation Drivers of Each Segment

Like we mentioned earlier, each segment has different value drivers. Different ways of thinking about intrinsic value.

The quick-and-dirty drivers of each segment are as follows:

- **Upstream:** Oil & Gas Reserves (Proved / Unproved)
- **Midstream:** Distributions to Shareholders (Dividends)
- **Downstream:** Lower Commodity Prices = Higher Crack Spreads

When valuing upstream companies, focus on their **proved/unproved reserves**. Think of E&P reserves as blood in a body. Run out of blood and you die. Lose enough blood and you die. The same applies with upstream companies. Most of their future value lies underneath the ground -- in what they can extract over the life of their reserve base.

Midstream companies usually take the form of MLP (Master Limited Partnerships). Traditionally, MLPs pay out almost 100% of their cash flow in distributions to shareholders (read: dividends). Midstream companies feel the most “normal” out of all segments. Other companies pay dividends. But midstream companies must pay distributions through cash.

What are the main drivers of their cash generation? A few examples:

- Increasing the volume of products processed on existing assets
- Reducing costs through improved operations and scale
- Making accretive acquisitions
- Developing new assets

Unlike E&P companies, midstream businesses can become better businesses on both the cost *and profitability side*. Remember, *E&P companies are beholden to the almighty commodity price*.

Downstream companies are a bit different. Their profits react in an inverse fashion to the underlying commodity they serve. In other words, **the lower the commodity price, the higher the profits for downstream companies**.

The phenomenon above is called the **crack spread**.

Step 3: Identify Proper Valuation Method For Each Segment

Alright, we know the main players in the industry. We know the main drivers within those main players. The final step is to determine the optimal valuation method for each segment. Here's the quick-and-dirty framework:

- **Upstream:** EV/Proved Reserves, EV/Daily Production, EV/EBITDAX
- **Midstream:** Dividend Discount Model, EV/EBITDA
- **Downstream:** DCF, EV/EBITDA

Downstream valuations are self-explanatory. You've seen discounted cash flow models before, so there's nothing new there. I want to focus our time on upstream and midstream. Each has their own unique spin on how they're valued.

Upstream Valuations

Let's start with Upstream companies. Valuing Upstream businesses on EV/Proved Reserves allows an investor to see how much they're paying for the business' main asset. For instance, a company trading at 0.5x EV/Proved Reserves means you can buy the business for half its reserve value.

Then there's EV/Daily Production. In short, you're valuing the business based on how much oil / gas it extracts on a daily basis from its reserves. This gives you a good picture of a company's productivity and efficiency -- and how much you're paying for those daily drills. You don't want to pay a hefty price for less production. Less production means less revenues. Which means less earnings, etc.

You might've noticed a confusing term, "EBITDAX". Don't be confused. It's simply EBITDA plus backing out exploration costs. The industry uses EBITDAX because most firms embed the cost of exploration into Depreciation, Amortization and Depletion. Adding exploration back equalizes those adjustments.

Midstream Valuations

Let's move on to Midstream companies. Midstream businesses are usually MLPs, so they pay dividends. We can use the dividend discount model to value such business. The dividend discount model is simple. You take the total value of all future cash dividends, and discount them back to the present.

That's it.

Let's use our above example of Kinder Morgan (KMI). KMI pays a \$1.05 annual dividend to shareholders. Let's assume they maintain that dividend over the next ten years. At the end of year 10 you'd receive \$10.50/share in total dividends.

Now, what price should we pay per share if we wanted to generate a 10% return into the future? \$10.50/share.

KMI currently trades at \$14.74/share (\$33B market cap). According to our dividend model, we should pay no more than \$23.73B for the company.

Trouble With Dividend Discount

The obvious issue with a dividend discount model is the assumption that a company will pay a dividend into perpetuity. If COVID-19 has taught us *anything it's that long-standing dividend aristocrats can cut dividends*.

Recap: Focus On What Matters

Energy stocks can be daunting for first-time venturers in the space. That said, once you break down the industry into its main drivers, analysis gets easier. Simplify, simplify, simplify.

We know what drives revenue and earnings growth in upstream: commodity price increases and proved/unproved reserves.

We know what drives revenue and earnings growth in midstream: volume of products processed on existing assets, reducing costs through improved operations and scale, accretive acquisitions and developing new assets.

We know what drives revenue and earnings growth in downstream: lower commodity prices and increases in crack spreads.

Focus on these drivers -- the rest is noise. Get to first principles and these stocks becoming easier to "solve". These are cyclical beasts however, tread with caution. We're not looking for buy-and-hold investments. Cyclical swing longs is our goal.

Now, let's get to some names we like.

Micro: Natural Gas Plays

The Big Theme: Finding Asymmetric Value in Natural Gas

- ◆ Cabot Oil & Gas (COG)
- ◆ Antero Resources (AR)
- ◆ Range Resources Corp (RRC)



Cabot Oil & Gas (COG)

Business Description: Cabot Oil & Gas Corporation, an independent oil and gas company, explores for, exploits, develops, produces, and markets oil and gas properties in the United States. It primarily focuses on the Marcellus Shale with approximately 173,000 net acres in the dry gas window of the play located in Susquehanna County, Pennsylvania. The company sells its natural gas to industrial customers, local distribution companies, gas marketers, and power generation facilities through gathering systems and pipelines. - TIKR.com

Proved Reserves Facts & Figures:

- **Proved Reserves:** 12.309T cubic feet (62% developed)
- **Proved Reserves 3YR CAGR:** 11%
- **2020 Projected Average Production Rate:** 2.4M cubic feet/day (876M cubic feet/year)

COG is the lowest-cost producer of natural gas in its industry. Last year, the company averaged \$1.44/Mcfe in all-in operating costs (including non-cash expenses). At an average natural gas price of \$2.45 that's around \$880M in operating income. Subtract interest and income taxes and we're left with over \$600M in net earnings.

But that was at \$2.45 natural gas.

At the time of writing, natty futures hover around \$1.925. Much lower than COG's reported average price in 2019. If we think about this through multiple scenarios, we begin to paint a picture of what future cash flows might look like. Check out the below chart:

| NG! Price | COG All-In Operating Cost | Net Cash Flow/Mcfe | Average Mcfe/Year | Average Annual Op. Income |
|-----------|---------------------------|--------------------|-------------------|---------------------------|
| \$2.45 | \$1.44 | \$1.01 | 870 | \$878.70 |
| \$2.00 | \$1.44 | \$0.56 | 870 | \$487.20 |
| \$1.90 | \$1.44 | \$0.46 | 870 | \$400.20 |
| \$1.85 | \$1.44 | \$0.41 | 870 | \$356.70 |
| \$1.75 | \$1.44 | \$0.31 | 870 | \$269.70 |

The above examples get us around \$478M in average operating income given the following natural gas prices. COG paid around 6% of their operating income in interest last year. That's roughly \$28M on our average income. That gives us \$450 in operating income after interest. Subtract another 22% for income taxes (\$99M) and we get \$350M in net income.

Balance Sheet & Downside Protection

The company has around \$1B in net debt on the balance sheet. COG's de-leveraged over the last few years. Net debt/EBITDA hovering around 0.9x. The good news is most of their debt isn't due until 2024. \$575M of COG's debt matures in 2024 at 3.67%. That's not bad. Another \$312M comes due in 2026 at 4.17%. Also not a bad rate.

Another important metric to check with NG plays (or any commodity play) is hedging. COG's hedged through October 2020. This isn't ideal -- but not terrible. Other companies (AR, for example) are hedged through 2022. COG's hedged a little over \$2.00 on 39.8Mmbtu of natural gas.

Valuation: Not Cheap Enough Right Now

Like we mentioned earlier, valuing O&G companies is all about projecting potential commodity prices and production rates. There's no sense in thinking about revenue growth from a traditional standpoint. It all depends on how much the commodity costs, and how much they can extract from the ground.

We know COG plans to extract roughly 876M cubic feet in 2020. Let's assume they average that over the next five years. Next we'll assume a low, medium and high price for natural gas for our estimated time horizon. We're using NG's trading range as our guide:

-Low: \$1.60

-Medium: \$1.95

-High: \$2.25

Then, we estimate our annual all-in operating expenses to extract the gas. We're assuming \$1.44/Mfce.

Here's our operating income outcomes:

-Low: $(\$1.60 - \$1.44) * 876 = \$140M$

-Medium: $(\$1.95 - \$1.44) * 876 = \$446M$

-High: $(\$2.25 - \$1.44) * 876 = \$709M$

So we've got our operating income. Now we can turn it into EBITDAX. Remember, we add the "X" to account for Exploration costs. Here's what it looks like :

| Scenario | Operating Income | D&A (46% of OI) | Exploration Cost (2% of OI) | EBITDAX |
|----------|------------------|-----------------|-----------------------------|------------|
| Low | \$140.00 | \$64.40 | \$3.08 | \$207.48 |
| Medium | \$446.00 | \$205.16 | \$9.81 | \$660.97 |
| High | \$709.00 | \$326.14 | \$15.60 | \$1,050.74 |

From here we can get a roughly right estimate of free cash flow by subtracting maintenance capital expenditures. Last year COG's cap-ex represented 60% of their EBITDAX. If we use that figure going forward our free cash flow looks like this:

| EBITDAX | Cap-Ex (60% of EBITDA) | Free Cash Flow |
|------------|------------------------|----------------|
| \$207.48 | \$124.49 | \$82.99 |
| \$660.97 | \$396.58 | \$264.39 |
| \$1,050.74 | \$630.44 | \$420.30 |

Let's assume COG remains stagnant at \$420M in free cash flow over the next five years. Discounting those cash flows at 10% gives us roughly \$4.2B in EV. After subtracting net debt (\$1B) we're left with \$3.2B in shareholder equity.

Clearly we need natural gas to rise in order for COG to look attractive. So yes, COG is a popular name in the natural gas industry -- but at its current price, we would need NG to rise considerably to get interested.

Antero Resources (AR)

Business Description: Antero Resources Corporation, an independent oil and natural gas company, acquires, explores for, develops, and produces natural gas, natural gas liquids, and oil properties in the United States. As of December 31, 2019, the company had approximately 451,000 net acres in the southwestern core of the Marcellus Shale; and 91,000 net acres in the core of the Utica Shale. It also owned and operated 324 miles of gas gathering pipelines in the Marcellus Shale; 17 compressor stations in the Marcellus Shale; 110 miles of low-pressure and high-pressure gathering pipelines in the Utica Shale; 8 miles of high-pressure pipelines; and 2 compressor stations in the Utica Shale. - *TIKR.com*

Proved Reserves Facts & Figures:

- **Proved Reserves:** 18.9T cubic feet
- **2020 Projected Average Production Rate:** 3.5 Bcfe/d (1.2Tcfe/year)
- **Net Asset Value:** \$6.60B (\$24.50/share)
- **Average NG Hedge Price:** \$2.80

Antero Resources (AR) is an interesting opportunity for a few reasons:

1. Significantly reduced their 2020 cap-ex program, saving \$600M
2. Plan on monetizing their asset base to meet 2021 debt maturities
3. AR is 94% Hedged in 2020 and 100% Hedged in 2021 at \$2.80 natural gas
4. Reduced Net Debt \$120M after buying back \$608M notes at 20% discount

AR's bold cap-ex budget reductions should result in robust free cash flow generation. The company estimates they'll do roughly \$175M in free cash flow in 2020. That's a 23% free cash flow yield as of May 1st stock price (\$751M market cap). The company's also estimating an 8-10% increase in annual production over the next three years.

Let's see how revenues and operating income might look over the next five years.

AR's expected to do around \$4.4B in revenue this year on 3.5B in daily production. That gets us roughly \$1.25/cfe/day in revenue. Now, we know the company's estimating \$175M in free cash flow this year. What does that look like on a per-unit basis? If we divide our \$175M by 3.5B we get roughly \$0.05/cfe/day of free cash flow.

And we know production's expected to increase around 9% per year for the next few years. Here's what our revenues and FCF could look like over the next five years assuming 9% production growth rates:

| AR Nat Gas Production | Revenue/Bcfe/d | FCF/Bcfe/d | FCF Yield | FCF Multiple |
|-----------------------|----------------|------------|-----------|--------------|
| 3,500 | \$4,375.00 | \$175.00 | 23.30% | 4.29 |
| 3,815 | \$4,768.75 | \$190.75 | 25.40% | 3.93 |
| 4,158 | \$5,197.94 | \$207.92 | 27.69% | 3.61 |
| 4,533 | \$5,665.75 | \$226.63 | 30.18% | 3.31 |
| 4,941 | \$6,175.67 | \$247.03 | 32.89% | 3.04 |

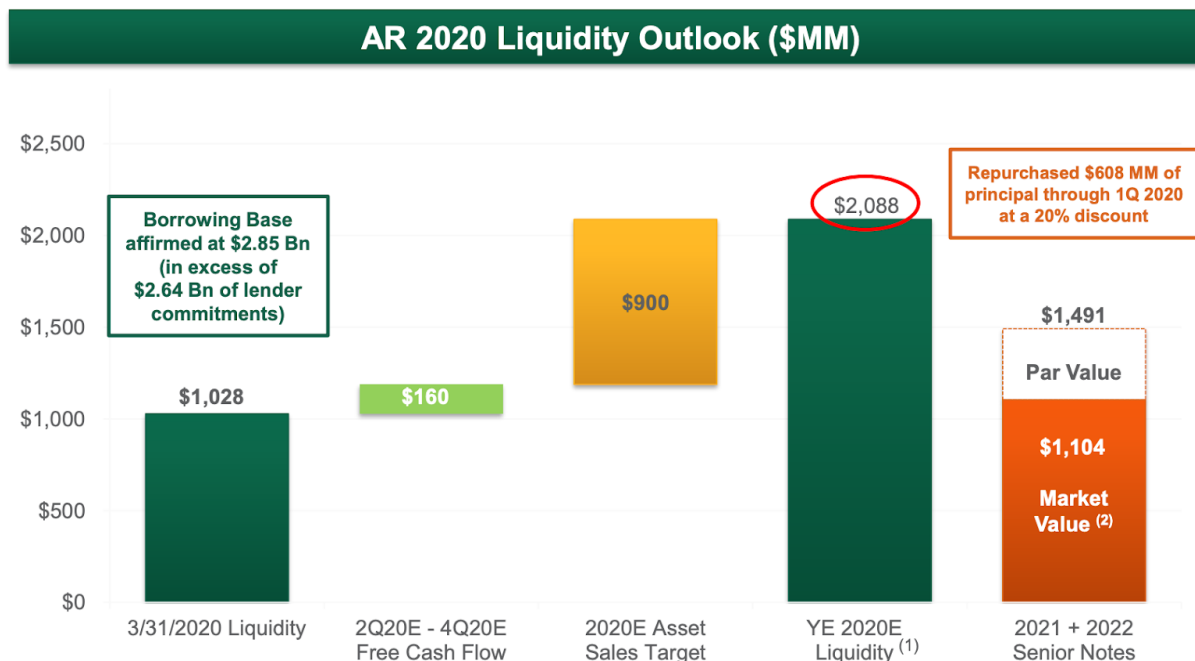
In other words, at 9% production growth you can buy AR for around 3.5x 2022 free cash flow. That's nearly 30% in FCF yield for a cash-generating, de-leveraging company returning capital to shareholders via buy-backs.

Again, that's at the current hedged level for natural gas prices. If we see anything over ~\$2.82 all those figures increase.

Liquidity Protection

One of the stronger drags on AR's share price is their 2021 debt maturity. The company owes a little over \$1B in debt in 2021. Investors are worried about AR's ability to service that debt. Fortunately, management has a plan to monetize their existing asset base to provide ample liquidity in the face of what's due.

Take a look at this slide from AR's latest pitch deck:



The company has over \$1B in current liquidity. They're expecting another \$175M in free cash flow, and another (potential) \$900M from asset sales. This would give them nearly double the market value of their debt.

But where would the money from the asset sales come from? Antero lists the following:

- Proved Reserves: \$5.4B value
- Overriding royalty: N/A
- Minerals: N/A
- Hedges: \$1.1B value
- Midstream ownership: \$675M market value

As you can tell, AR has a lot of room to work to get to that \$900M in asset sale proceeds.

Strong-Handed Insiders

AR's co-founders own about 9% of the company. FPR Partners and BlackRock make up another 19%. There's strong hands at the top. Management also has a history of buying back their stock pre-COVID-19. As they generate positive free cash flow, I would expect further buybacks.

Risks

The obvious risk is natural gas prices remain at or below the company's hedged book within the next two years. Another risk is lack of hedging post 2021. We would need natural gas prices to rise in order for AR to lock in a few more years of hedging above their breakeven price.

Range Resources (RRC)

Business Description: Range Resources Corporation operates as an independent natural gas, natural gas liquids (NGLs), and oil company in the United States. The company engages in the exploration, development, and acquisition of natural gas and oil properties. It holds interests in developed and undeveloped natural gas and oil leases in the Appalachian and North Louisiana regions of the United States. - *TIKR.com*

Proved Reserves Facts & Figures:

- **Proved Reserves:** 18.2T cubic feet
- **Acres of Land:** 500K Net Acres in Appalachia
- **Proved Reserve Value/Share:** \$17 (183% upside)
- **Cash Unit Cost:** \$1.83/mcfe
- **Average Production:** 2,300Mcf/day

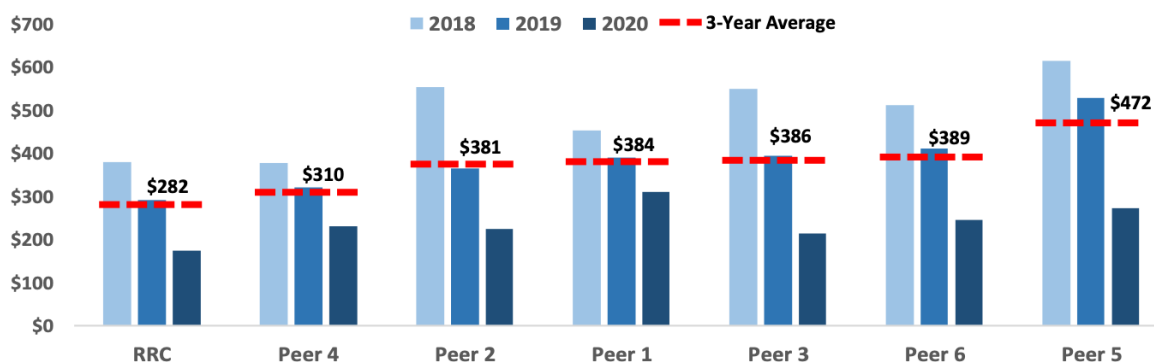
Range Resources meets nearly all our criteria for a great natural gas play:

- Strong insider buying
- Recent asset sales to shore up liquidity
- Low cash unit costs
- Reduced long-term debt

Like most natural gas companies, revenue and earnings look “ehh”. RRC lost nearly \$2B in operating income last year. The income statement hides the improvements in the underlying business. For example, the company only lost \$100M in free cash flow last year (courtesy of *TIKR.com*):

| | | | | | |
|--|---------------|-----------------|----------------|---------------|---------------|
| Cash from Operations | 691.40 | 387.07 | 816.25 | 990.69 | 681.84 |
| <i>Memo: Change in Net Working Capital</i> | <i>(9.13)</i> | <i>(106.39)</i> | <i>(47.17)</i> | <i>(8.22)</i> | <i>2.54</i> |
| Capital Expenditure | (1,109.97) | (512.79) | (1,212.54) | (1,023.00) | (748.43) |

That’s all in the past. RRC’s taking measured efforts to reduce all-in operating costs per well. And they’re doing a damn good job. Take a look at the chart below showing 2018-2020 D&C cap-ex as well as 3YR average:

D&C Capex per Mcfepd Reflects Relative Capital Efficiency

RRC has the lowest D&C costs among its peer group on a 3YR average. But look at how much they were able to slash the 2020 D&C capex! They’re under \$200M. No other peer can say that.

Decades of Wells To Drill

Cost savings are only good if you can squeeze cash flow from them. Where does the cash flow come from? Drilling wells. RRC has over 20 years worth of untapped wells to drill. They alluded to at least 30 years worth of wells in a 2018 investors presentation.

In fact, RRC claims to have around 100Tcfe of potential reserve resources on their land. Of course we have no idea if this is right. And even if it's right, we have no idea how close it is to 100Tcfe. But it's more than 0. And at the current stock price, you're getting all of this **for free**.

Moreover, RRC isn't including the potential reserves in its reserve present value calculation. There's a good chance that \$17/share understates the value of RRC's reserve holdings.

Getting To Unit Economics

Let's break down RRC's future revenue and earnings on a unit basis. On the cost side we have sight towards \$1.83 all-in per Mfce/day. Looking out another four years, RRC's guiding to ~\$1.60Mfce/d in all-in cost. We're not including 2024 costs in our model, for the sake of conservatism.

RRC's breakeven around \$2.00 natural gas. Anything above that on a spot-basis is instantly accretive to bottom-line FCF.

The company's estimating 2.3Bcfe/d in production. Last year they did 2.28Bcfe/d and generated \$2.82B in revenues. That gets us an average revenue/mfce of \$1.24. But over the next five years, there's a path towards higher revenue with lower all-in operating costs.

We believe higher gas prices coupled with lower all-in costs will bring **loads** of free cash flow to RRC. How much -- we don't know for sure. According to an investment report by DFP Capital, every \$0.01 improvement in RRC's cost structure translates to \$8M in run-rate annual FCF. Given that RRC's unit costs improved \$0.13 from Q1 2019 to Q1 2020, that's a potential \$104M in run-rate FCF.

Multiple Ways To Win

RRC has multiple ways to win. We don't need crazy-high natural gas prices to achieve satisfactory returns. RRC's asset base is one of the most prized in the natural gas industry. Their 18Tcfe should be worth roughly \$17/shar net of debt. The company also announced a \$100M share buyback program. At current stock prices, these buybacks are highly accretive to shareholder value.

Finally, further asset sales should reduce net debt, which would also increase shareholder value. Here's management's take on what they're looking to do in the years ahead:

Jeffrey Ventura

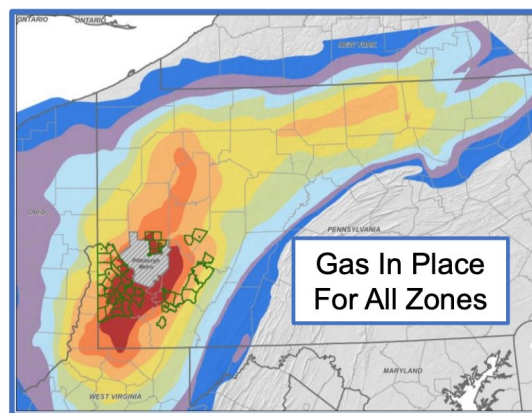
Again, let me start at a high level and turn it to Mark. It's the same answer I gave earlier. We have been very clear, I think, about our philosophy and strategy at Range and what we're trying to accomplish. And the goal is really to generate free cash flow per share and real corporate returns. So with that philosophy, we really don't see the need or benefit to return to high growth. So prices are significantly higher and we're generating significant free cash flow. We'll first direct that to bolstering the balance sheet. And then from there, we'll look to position to expand cash returns to shareholders. But Mark?

RRC will likely take most of that initial free cash flow/asset sales to reduce debt. After that, we believe management will return most of that cash flow back to shareholders via buybacks.

Finally, let's talk about those reserve assets. Not all assets are created equal. Depending on where they are in the country, proven/unproven reserves carry different values. As luck (or fortune) would have it, RRC's sitting on one of the most prized pieces of land in the NG space.

Check out the photo to the right from RRC's latest investor's presentation. It shows the total amount of natural gas available in specific zones. Red means lots of gas. Blue means low gas. Notice how there's gas available in every zone throughout South-west Pennsylvania.

The golden egg within the SW PA zone is the company's Marcellus acreage. And they haven't even tapped into it yet. For example, the company estimates they have 3.3K undrilled wells in the Marcellus region. Out of these 3.3K, 2,000 are estimated to have over 2.2Bcfe per 1,000 foot drilled.



Your Macro & Value Operators,

Alex and Brandon

We are drowning in information, while starving for wisdom. The world henceforth will be run by synthesizers, people able to put together the right information at the right time, think critically about it, and make important choices wisely. ~ E.O. Wilson, "Consilience: The Unity of Knowledge"