The Virtues of Slower Growth:

Why Midstream MLPs should aspire to be the "next Tobacco"

After years of lagging the S&P 500, midstream stocks have fallen sharply as Covid hit oil prices in early 2020, and sentiment is dismal. ESG concerns have been identified as *additional* headwinds for the pipeline sector for the next several years.

However, our study finds slowing growth and cash returns can actually spur strong stock performance, even in "declining" industries. Midstream has unique potential to reduce discretionary spend and return cash to shareholders, a proven recipe for strong returns in a variety of industries, from tobacco to tech.

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For years, it has been widely believed that "growth is good" for midstream stocks. But what if that is totally wrong?

For the pipeline industry, the shale revolution inspired more than a decade of growth - in revenues and capital employed - but despite record capex budgets year after year, very little value accrued to equity investors. The siren song of shale-fueled growth lured many management teams to commit to an unprecedented slate of highly capital intensive projects, which led to higher debt leverage and reduced industrywide returns on invested capital. Despite years of disappointing returns to equity, it has remained an article of faith among many midstream investors and management teams that "growth is good." Accordingly, with the impact of Covid-19 in 1H 2020, investors are actually concerned about midstream's dwindling growth prospects, despite the fact that growth has created so little value over the last decade.

In our report below, we find that Covid may in fact represent a golden opportunity for midstream: throughout history, mature industries that intentionally reduce investment and growth rates in order to generate more free cash flow from existing operations have generated strong equity returns, even with slowing industry backdrops. Midstream is poised to aggressively reduce capital spending and free up more cash for shareholders – a model employed with great success in other industries, such as tobacco (and even tech). Given the low capital intensity of most energy infrastructure once it has been built, we believe midstream is ideally positioned to emulate the example set by tobacco and other mature industries.

History shows that declining growth is often a virtue, not a vice, for equity investors

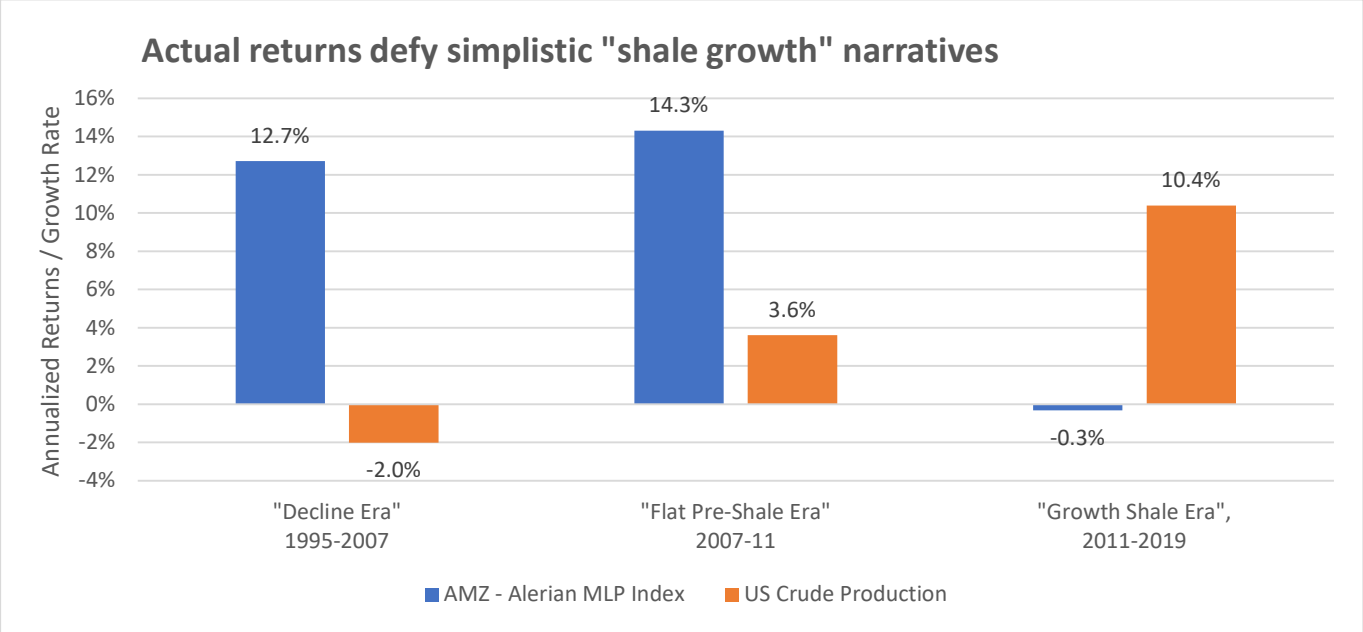
As our name indicates, we believe there is nothing new in markets, and history often rhymes. **The historical case studies examined in this report lead us to 3 key conclusions:**

1. **Industry-wide growth does not necessarily improve capital efficiency, as measured by returns on invested capital (ROIC).** In fact, the high growth period from 2011-2019 was ***inversely*** related to industry ROICs and free cash flow, contrary to consensus wisdom.
2. **Midstream industry-wide growth rates do not determine stock market performance.** During the industry's highest growth period from 2011-2019, the midstream sector returned -0.3%, significantly underperforming the broader equity market. Ironically, in the case of the midstream industry, the strongest period of outperformance occurred **before** the high-growth shale era!
3. **Over time, the market has rewarded industries that allocate capital well, even when revenue growth is negative.** Tobacco was the original "uninvestible sector," but regulatory pressure and declining consumption coincided with 15+ years of outperformance vs. the S&P 500. Why? Because tobacco showed high capital efficiency. As midstream's "shale buildout" ends, **we see midstream poised for unprecedented levels of capital efficiency**.

As we argue below, it is free cash flow generation and shrewd capital allocation that drive long-term equity performance across various industries. We expect this historical pattern to reassert itself for today's undervalued midstream stocks as capital spending declines rapidly and cash flows remain flattish.

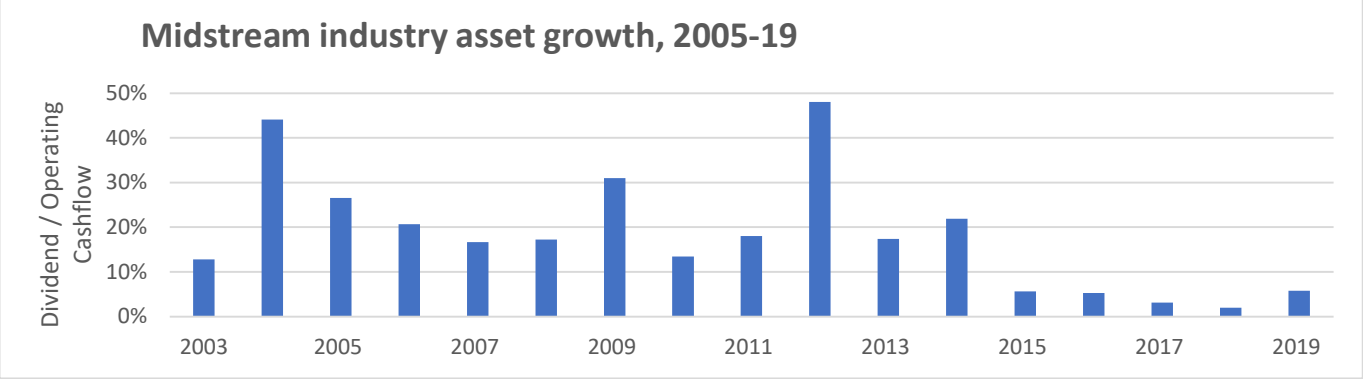
The US is poised to experience declining oil and gas production, but does this predetermine a bleak future for midstream equities?

Interestingly, we begin our discussion of the midstream outlook with a "dry" historical fact, which is in our opinion too often overlooked: **There is actually NO evidence that shale production growth has been beneficial for midstream equity returns. In fact, unprecedented shale growth has coincided with unprecedently poor midstream returns.** By contrast, the "Decline Era" in 1995-2007 and "Flat Pre-Shale Era" in 2007-2010 were both far superior for midstream returns (for MLPs and Corps).



Source: Bloomberg, Recurrent research

This seems counterintuitive: How could slowing growth or declines be "good" for equity investors? The reality is that extended periods of high growth, despite sometimes being cheered by investors, can pose significant risks to a company's long-term shareholder value. In a few years, a capital-intensive company pursuing a growth strategy might deploy >50% of its total invested capital, the success of which may not be determined for years to come. Even if the capital is wisely deployed, extended periods of limited free cash flow and expanding capital deployment can increase risks to shareholders, and reduce valuations.

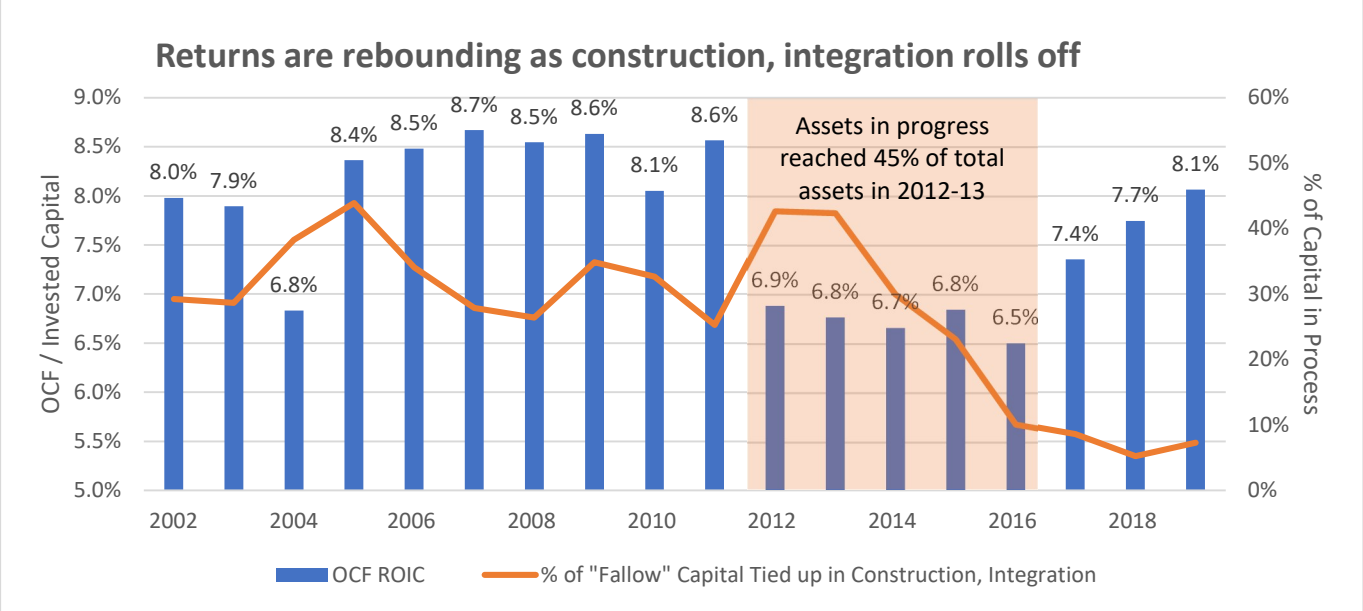


Source: Bloomberg, Public Filings, Recurrent research

Peak Growth, 2011-2016: Returns fell not from lower cash flows, but from high levels of "fallow" capital, tied up in construction projects

In the early 2010s, the midstream industry significantly expanded its capital employed by constructing and acquiring at an unprecedented pace. Midstream operating cash flows (OCF) did not fall during this aggressive buildout, but capital efficiency declined meaningfully starting in 2012, and debt levels rose as "fallow capital," non-earning assets still under construction, grew to nearly 45% of capital in the early 2010s. Since 2016, capital investment has slowed dramatically and the share of "fallow capital" employed in construction has fallen below 10%, boosting ROICs. Capital efficiency of midstream has returned to levels not seen since the end of the first decade of this millennium, as shown below.

Since the beginning of the Covid-19 pandemic, we've seen early signs that this trend is accelerating as companies have announced dramatic discretionary capex reductions, which are likely to improve ROICs, even as shale production falls. We discuss Covid impacts on midstream in more detail below.



Source: Bloomberg, Public Filings, Recurrent research

Understanding how growth can imperil returns on capital

A company with 40% of assets under construction is almost certain to be a lower-return company than a company whose assets are 90% operational, even if the latter company has a low growth rate. A low-growth company, simply by generating cash flows from 90% of assets, has a higher return on invested capital (ROIC). This discussion returns us to the cornerstone of our investment process:

$$\frac{\text{ROIC}}{\text{WACC}} = \frac{\text{EV}}{\text{IC}} \qquad \frac{\text{Recurring cash flow vs. asset value (\%)}}{\text{Cost of financing (\%)}} = \frac{\text{Market value of debt + equity}}{\text{Historical cost to build it}}$$

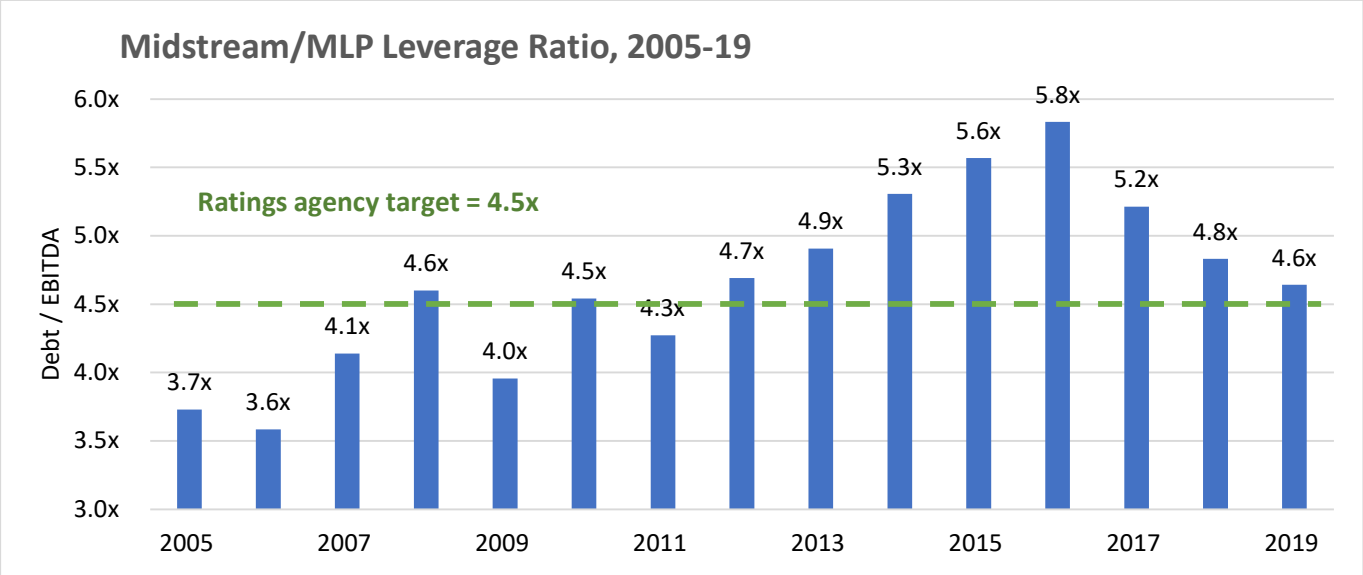
In plain English, EV/IC = ROIC/WACC implies that a company that cannot generate returns on new capital invested should return capital to shareholders, rather than destroying value through poor allocation.

Mathematically, increasing the justified value per share of a company (since market capitalization is embedded in enterprise value) requires changing at least one of the following variables:

1. increasing returns (ROIC),
2. reducing the cost of capital (WACC),
3. paying down debt/preferred claims while holding ROIC and WACC constant,
4. increasing invested capital (if returns are above WACC), or
5. decreasing invested capital (if returns are falling below WACC)

As shown above, one of the easiest ways to increase ROIC is simply by converting "works in progress," which we call "fallow capital" as it is not yet generating returns, into return-generating assets. It is very hard to increase a company's ROIC while deploying massive amounts of capital, year after year. This conversion of fallow capital to revenue-generating capital is currently occurring in the midstream sector.

Let's walk through the other variables. **#2 –** the cost of financing, or WACC, is typically set by the market and so is difficult to change unilaterally. **#3** – paying down debt and preferreds, can cause equity value to increase as other claims on the EV shrink. As was detailed in our 2019 and 2018 white papers, **#3** has been under way in the midstream industry for several years, as shown below.



Source: Bloomberg, Public Filings, Recurrent research

While midstream assets have seen ROICs fall below historical averages during the shale boom, industry ROIC is now rising (as shown on the preceding page) as fallow capital becomes productive capital. This brings us to **#4** and **#5** – managing capital allocation in a fashion commensurate with the ability of the industry to generate ROIC.

After more than a decade of accelerated growth to support the development of shale, the midstream industry is moving from a high-growth model to a low-growth model, which has already increased ROIC, and is set to generate unprecedented levels of free cash flow (OCF after capex) in coming years.

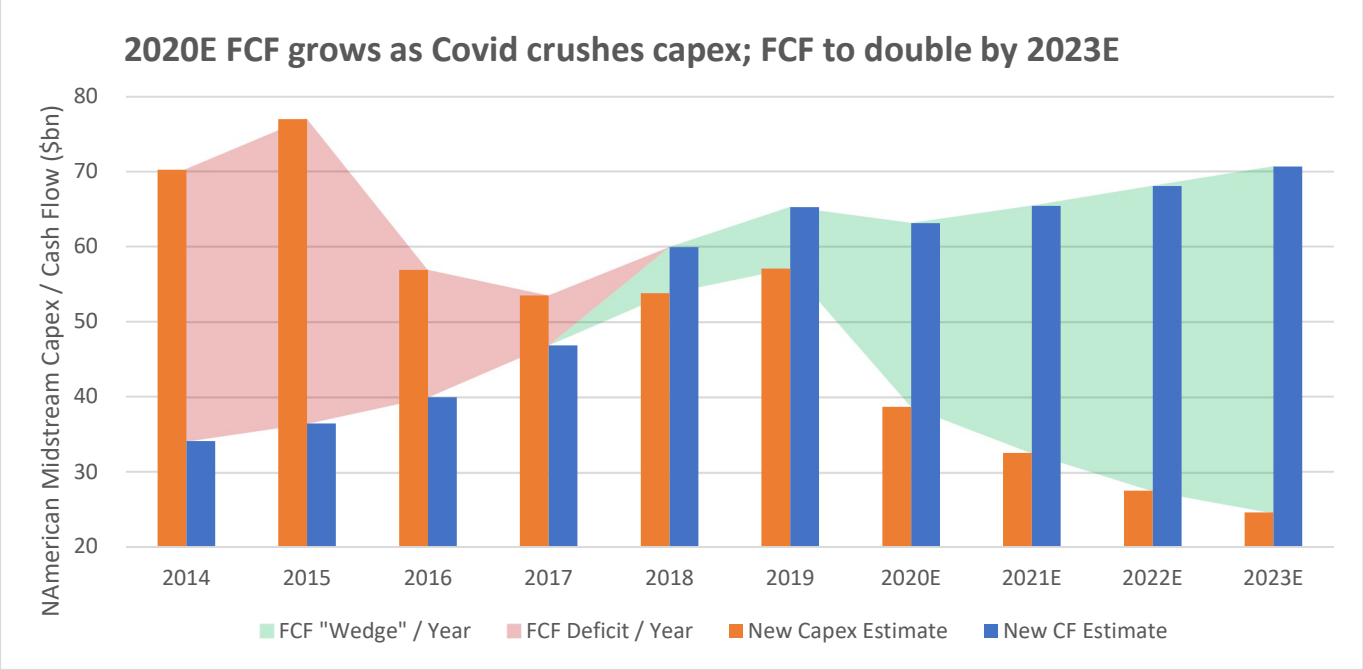
US oil shale production is set to materially fall in 2020 – but the revenue and EBITDA reductions will be largely offset by capex cuts

As we move through the 2020s, midstream operating cash flows are still likely to grow, albeit at a modest pace: Wall Street consensus estimates now estimate roughly 2% growth per annum during 2019-2022, as opposed to the pre-Covid expectation of 5% per annum. Since growth is driven by capital spending, the loss of 3% annual growth effectively reduces capital budgets by 50%.

Capex spending was forecasted to drop from roughly $60bn in 2019 to $35bn in 2022, or nearly a 50% drop from peak levels. Post-Covid, expectations are for a steeper capex reduction over this time, with 2022 now expected to see $25bn in capex. More near-term, midstream companies have cut $7bn out of capex budgets as a result of the Coronavirus pandemic, as illustrated on the next page. **Even after netting out expected $5bn of EBITDA losses from Covid impacts, FCF is actually expected to grow by nearly $2bn in 2020 from the impact of Covid as capex falls faster than cash flow, as we discuss below.**

This trend of falling capex was already well-established after 2015, but the economic impact of Covid has accelerated the trend, eliminating roughly 20% of industry capex spending in 2020 with declines expected to continue into 2021 and beyond. Across a broad midstream sector market cap of $350bn in May 2020, this capex trajectory effectively increases the annual free cash flow (FCF) yield of the sector by nearly 10%.

Below, we illustrate how free cash flow **(shown in green)** is set to dramatically increase in the early 2020s across the midstream sector, even incorporating the slower growth and lower commodity prices wrought by the global pandemic.

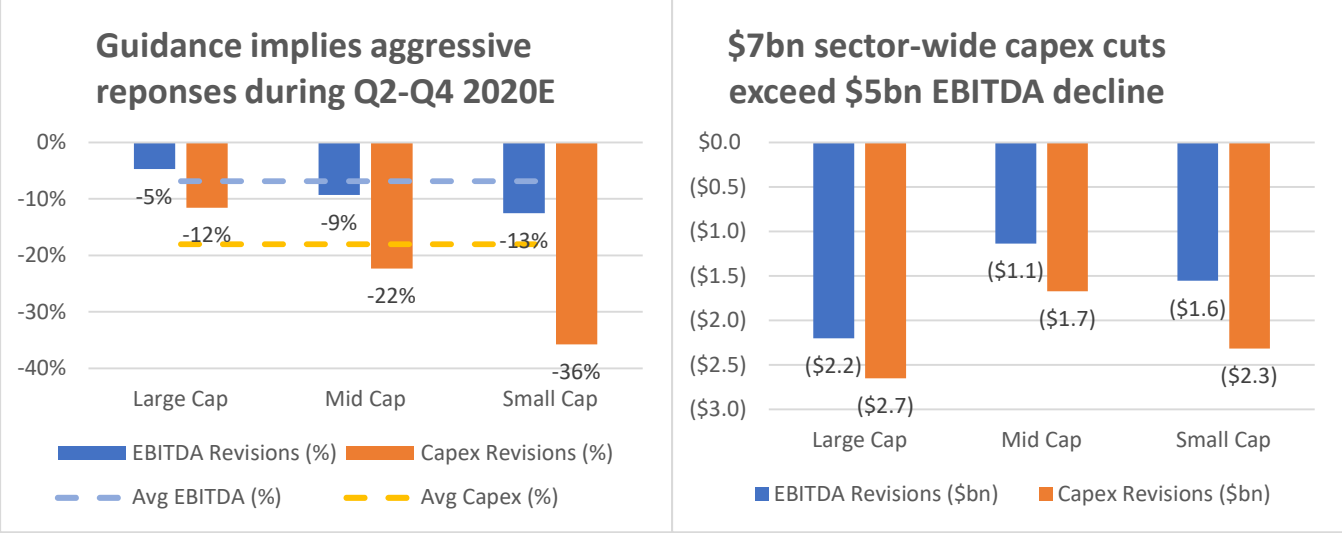


Source: Bloomberg estimates, Recurrent research, public filings; Notes: Includes companies in Alerian Midstream Energy, Alerian MLP Index.

Surprisingly, the net impact of Covid on midstream is positive for FCF

As a result of the global pandemic, Recurrent predicted in mid-March 2020 that midstream industry EBITDA would **decline by roughly 10-15% from peak levels over 18-24 months, with offsets likely coming from lower operating expenses and capex cuts**. Our early forecast reflected some generalities about North American midstream: first, US production is almost evenly split between oil and gas production on an energy-equivalent basis. Second, oil production was (and still is) likely to fall roughly 20-25% from peak as a result of low prices, gas production would be much more resilient, as it is largely consumed in power generation. Pipelines servicing end consumers, as well as storage assets, are also much less volatile than the pace of onshore oil drilling.

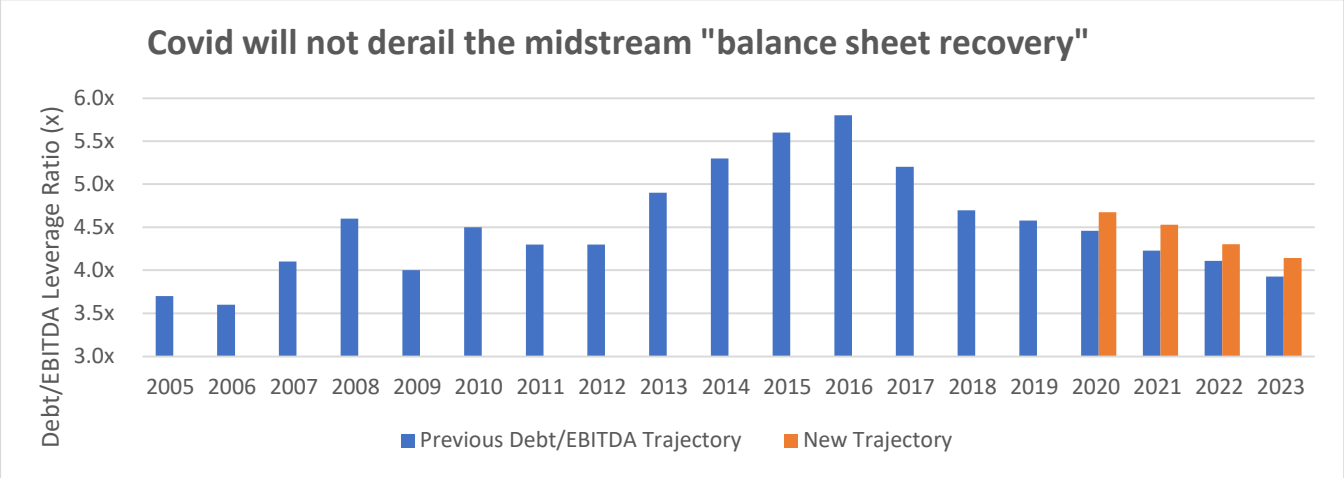
As of June 2020, this forecast remains on track. In fact, we have seen net free cash flow (FCF) **increase by $2bn** as a result of aggressive expense reductions and capex cuts in excess of EBITDA declines.

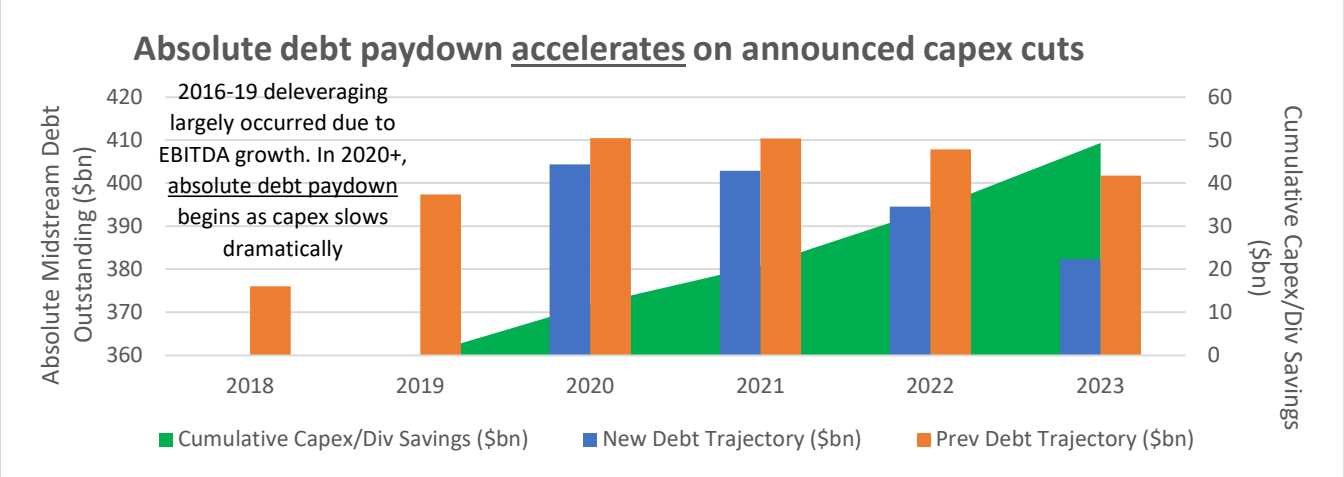


Source: Recurrent research, Bloomberg, public filings

Notes: Includes all constituents of the Alerian Midstream Energy Index (AMNA), which includes midstream Corps and MLPs. Guidance compares as of Feb 15 (pre-Covid) with May 9 (post-Covid). Large cap is defined as 8 companies with market caps larger than $15bn, Mid Cap is 11 companies with mkt cap $3bn to $15bn, and Small Cap is 22 companies smaller than $3bn, as of 4/30/20.

Covid may interrupt, but will not derail the multi-year midstream debt reduction program underway prior to the pandemic;





Source: Bloomberg estimates, Recurrent research, public filings.

Notes: Includes companies in Alerian Midstream Energy, Alerian MLP Index. "Previous trajectory" based on Bloomberg consensus EBITDA and capex estimates as of 1/15/20, as well as announced dividend policies. "New Trajectory" based on Bloomberg consensus EBITDA and capex estimates as of 5/15/20, as well as announced dividend policies, including the 20 midstream companies that have announced dividend reductions since early March.

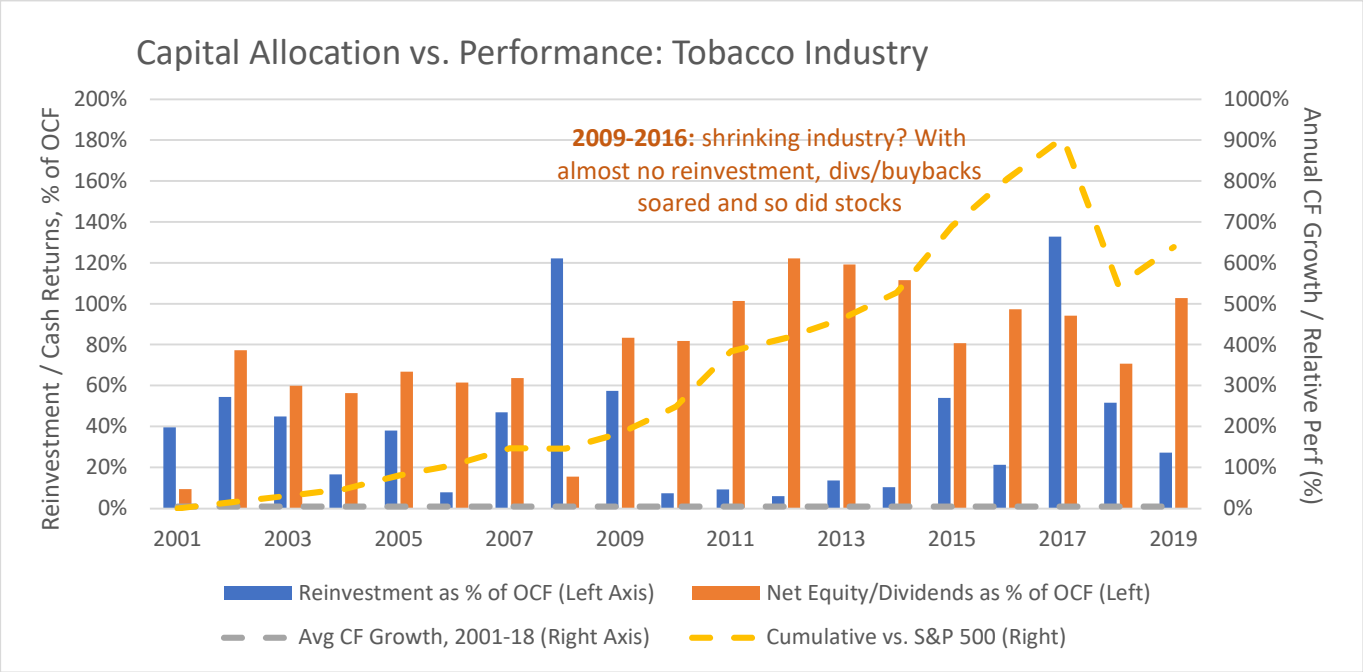
Again, we emphasize that today's midstream debate is not really around valuation – with double digit CF yields and in some cases, P/E ratios trading at 50% or larger discounts to the broader S&P, the sector is cheap on a variety of metrics. **The question remains, for midstream equity investors who have felt "pushed to the back of the line" by the prioritization of debt reduction during 2016-19, how to get comfortable that high cash flow yields will reach equity investors?**

In the next section, we look at other sectors that have capitalized on slowing growth, rising ROICs, and FCF generation as an example of what might await long-suffering midstream investors. **Across an array of industries, inside and outside of energy, low-growth strategies that prioritize ROIC and cash generation have provided a recipe for superior equity returns.** Midstream holds all the attributes to follow these examples. We look forward to a more capital efficient midstream sector in the 2020s, and the returns that are likely to follow, regardless of the external growth environment.

In the 2020s, we see midstream making more from less, typical of "low growth" sectors. We examine Tobacco – the original "dying industry"

The classic example of a "dying industry" is the tobacco industry. In 1999, tobacco companies found themselves the target of a lawsuit brought by the US Department of Justice (DOJ) accusing the industry of a "fifty-year conspiracy to fraudulently deceive the public" about the dangers of smoking. The tobacco industry was ultimately found liable by a US District Court and ordered to pay billions in damages, and faced years of uncertainty as the lawsuit lasted from 1999 until 2006.

Beyond legal penalties, the industry found itself associated with a wide array of underhanded corporate behavior, leading to the creation of "tobacco-free" investment mandates, as well as the very real business challenge of a shrinking smoking population in almost every developed economy, slowing growth in almost every major emerging economy, and a ban on most tobacco-related marketing.



Source: Bloomberg, Recurrent research, public filings. Notes: Stock performance reflects the S&P 500 Tobacco Index. OCF figures reflect Altria, Philip Morris Intl, Imperial Brands, British American Tobacco and Japan Tobacco.

Yet, as we know from the historical record detailed above, the **diminishment of tobacco consumption has been an objective of government policy in every major economy in the world,** yet tobacco stocks have experienced extremely robust stock performance since the early 2000s, with cumulative outperformance vs. the S&P 500 reaching 900% in 2017 before poor investments in e-cigarettes caused the sector to pull back in 2017 and 2018. Still, cumulative outperformance remains intact in year 10 of the longest bull market ever, even more impressive given the outperformance of growth stocks.

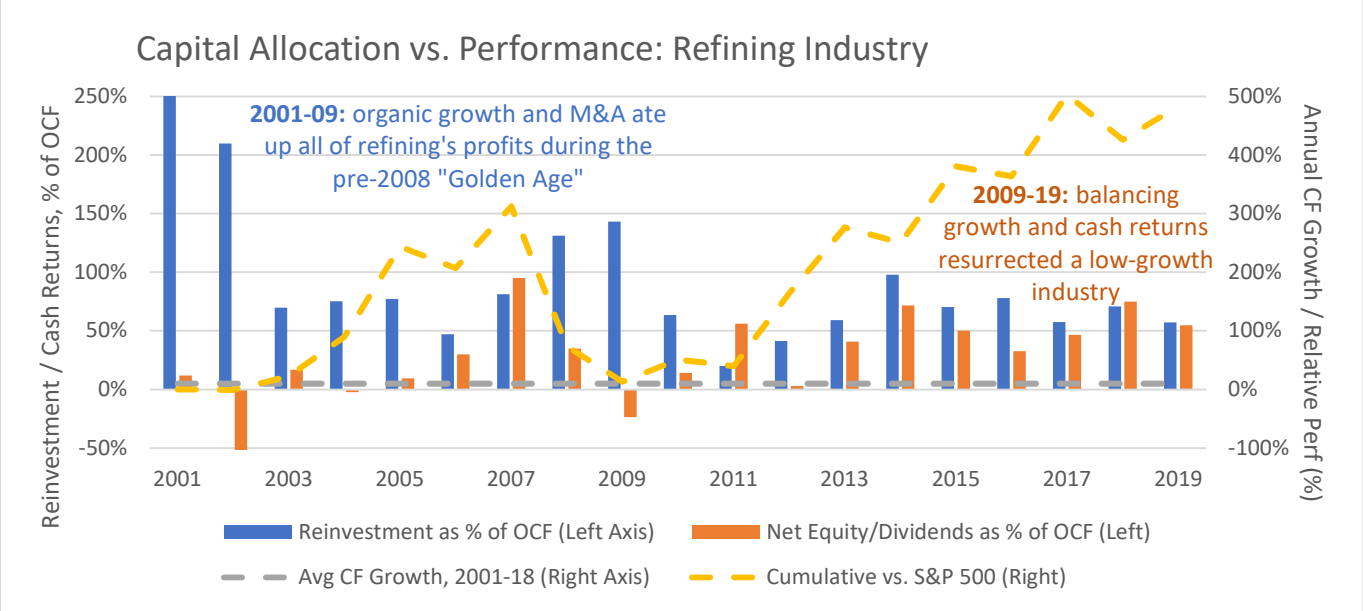
As shown above in orange, since 2001, tobacco stocks have hewed a narrow fiscal path, **returning a majority of OCF in every single year since 2001**. Outperformance notably accelerated in the post-Great Financial Crisis (GFC) period, when cash returns approached or exceeded 100% of OCF in every year from 2009 to 2017. Reinvestment has been minimal, and skewed to major industry-consolidating M&A.

Refining illustrates the "road not taken" for energy, with low growth, restrained capex, cash returns – and strong stock performance

The (perhaps bitter) irony for energy is that the subsector with perhaps the lowest demand growth, and most direct exposure to fragmented and less economically-sensitive competition from Asia, is refining. **Yet refiners have dramatically outperformed all other subsectors by following an almost-formulaic policy of returning 50% of OCF to shareholders and restraining capex**. This is true even when including capex funded by refiners' MLP subsidiaries.

Refining CEOs in the 1990s and 2000s were swashbuckling "visionaries" who wanted to invest in more flexible processing units to take advantage of growth in heavier, tar-like oil, while expanding in advance of emerging Asia's shift to automobiles. **In the early 2000s, weak margins did not deter refiners from reinvesting aggressively**. The bet paid off, for a time. In 2006-07, OCF surged, aggressively paid out in the form of buybacks – but CEOs were still eyeing new projects. **During the GFC, capex surged to meet demand that evaporated, margins fell, and refiners surrendered 4 years of outperformance in 18 months as cash returns dried up.**

By the late-2000s, refiners were viewed as the structurally least-advantaged segment of the energy industry, evidenced by efforts made by integrated oil companies to sell and spin "downstream" assets. Capacity continued to come online in the Middle East and Emerging Asia.



Source: Bloomberg, Recurrent research, public filings; Notes: Stock performance reflects the S&P 500 Refining Index. OCF figures reflect Valero, Tesoro/Andeavor, Marathon, Phillips 66, HollyFrontier, PBF, Delek, CVI Refining, Western Refining.

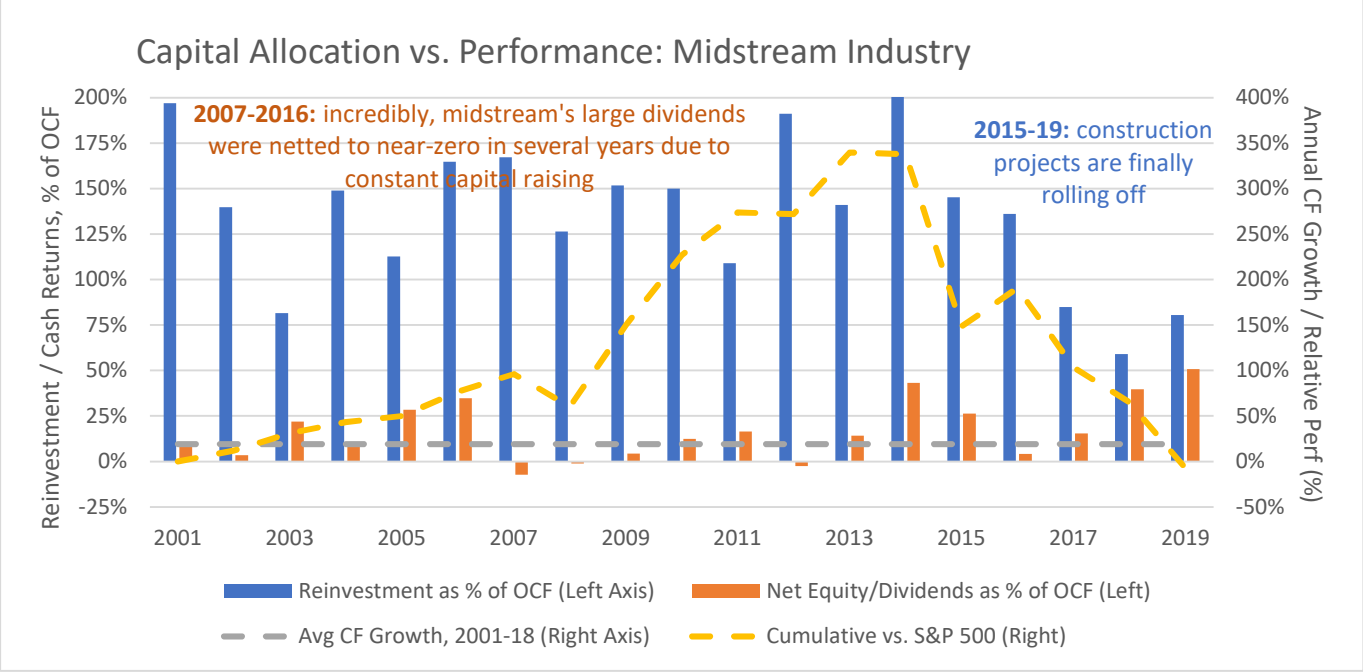
As many of the CEOs of the early 2000s were "nudged" to retire, a new wave of CEOs realized that with OECD demand in decline, the growth story was gone. The new CEOs **committed to formulaic cash returns, explicitly committing to limit further capacity growth.** Refiners' high capital intensity meant some capex was needed for maintenance, but cash returns were prioritized. The efficacy of this strategy is obvious above – **since 2009, with slower demand growth than natural gas and NGLs (primary products of shale E&Ps), and coal, refiners have outperformed the S&P 500 by 480%.** Pipelines share refiners' low variable costs, but midstream enjoys even lower cash maintenance requirements.

We return to Midstream – could pipelines follow the example of refining and tobacco, or does slow growth pose unique risks to pipelines?

As we have argued (hopefully compellingly), industry growth rates are not destiny. As we saw with tobacco and refining, when growth rates are high, the capital markets are often forgiving to companies with poor cash returns. When "growth" is no longer a given, capital markets can shut quickly and pressure valuations, **unless companies pivot to a policy of cash returns**.

While tobacco has very low reinvestment requirements (due to addictive products), midstream is still the most capital-efficient subsector in energy, with true "stay in business" maintenance representing a fraction of cash flow. Refiners have overcome high "stay in business" spending by returning cash to shareholders, but **midstream should be the energy leader in cash returns to shareholders**.

As we see below, there are 2 striking aspects to midstream's capital allocation history: first, investment during the shale era has been massive – averaging >100% OCF, similar to E&Ps. Second, for an industry that has advertised sizeable dividends, actual net payouts to investors averaged <30% of OCF during the shale era, as stock issuance effectively "clawed back" much of the dividends paid out. **Shockingly, so much equity was issued between 2008 and 2014 that net dividends (net of stock issuance, shown in orange) have actually increased since the wave of dividend cuts reduced payouts across the sector!**



Source: Bloomberg, Recurrent research, public filings; Notes: Stock performance reflects the Alerian MLP Index. OCF figures reflect Kinder Morgan, KMP, Energy Transfer, ETP, Magellan, Plains All American, Williams/WPZ, Oneok/OKS, TC Energy, Enterprise Products, Enbridge.

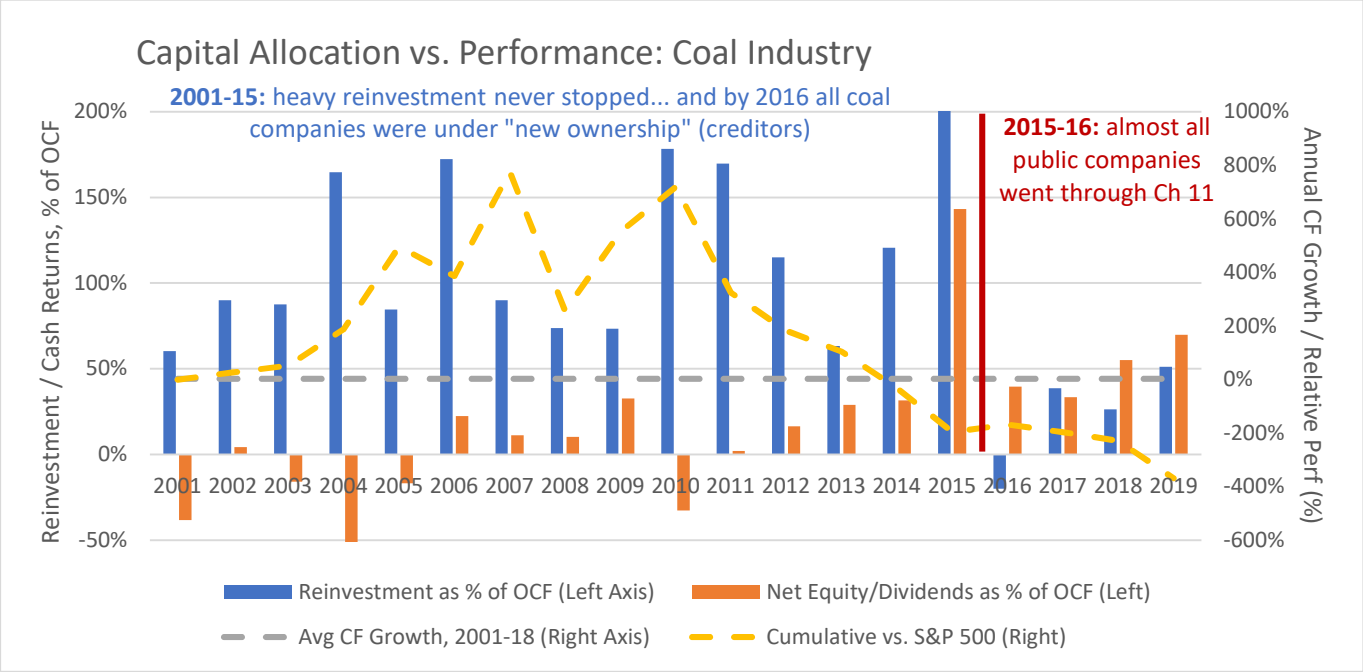
Shale-era investment not only reduced cash returns to equity but drove a massive increase in debt. The strategy of cutting dividends to reduce debt has caused significant underperformance vs. the S&P 500 since 2014. But there are green shoots. **A free cash flow wedge has emerged as reinvestment has declined from >100% of OCF to 60-70% of OCF, while the final "megaprojects" of the last 5 years are rolling off. Meanwhile, net payouts have reached 50% of OCF for the first time since 2001, as equity raises have been eliminated by self-funding pipeline companies.**

Bears focusing on stranded assets cite Coal. This ignores how demand grew rapidly during the years of investment that doomed the sector

The abundance of shale natural gas knocked coal off its century-long perch as the dominant fuel used in US electricity production. And, in turn, this demand destruction caused the utter decimation of coal equities, **leading to the bankruptcy of almost every publicly-listed coal company by 2016**.

But was coal pushed off the ledge by declining demand – or did the industry jump? The reality is that coal and refining could have been twins – until around 2009. Asian automobile adoption was driving motor fuel growth at roughly 1x GDP, but the electrification of BRICs and the movement of major populations into urban areas across oil-and-gas-poor Asian countries drove coal demand at a multiple of GDP growth, with BP's statistical review estimating 4.5% annual growth from 1998 through 2008 (compared to 1.5% growth for motor fuels over this same timeframe).

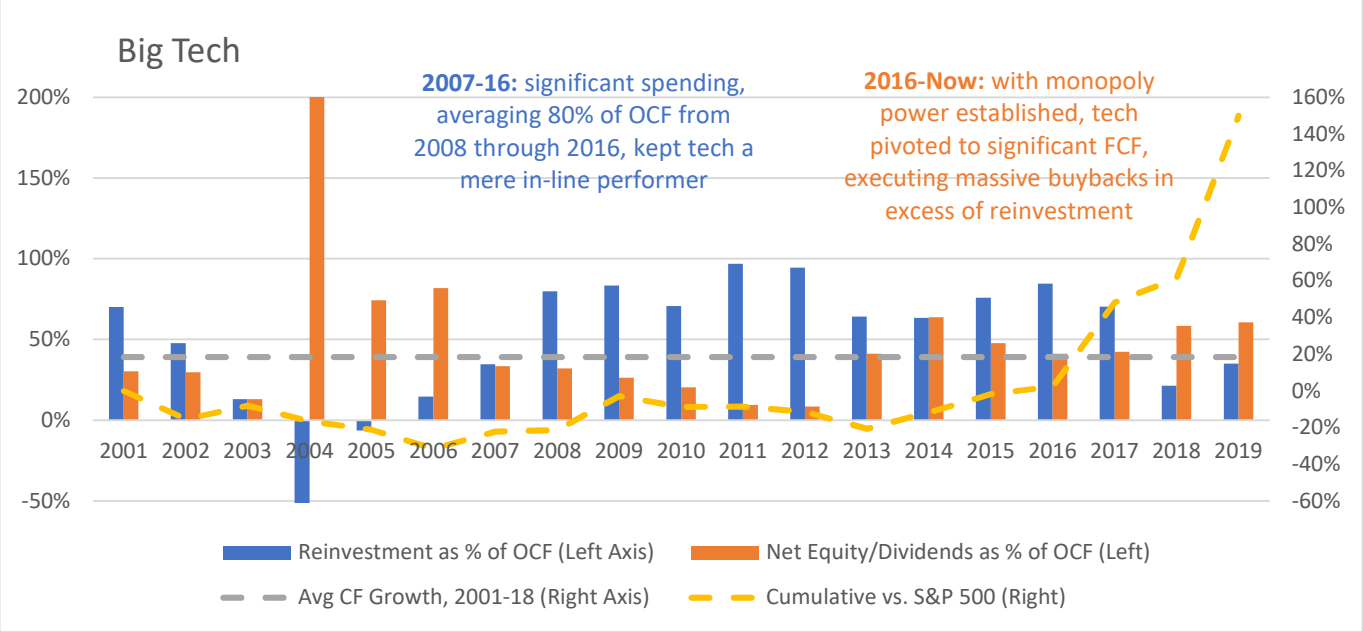
As can be seen below, while demand grew rapidly pre-GFC, companies were rewarded for raising and spending capital. By 2010, US gas prices fell 75%, and Chinese demand was slowing, and yet the industry spent almost 150% of OCF on reinvestment from 2010-15. **By 2016 the industry belonged to creditors.**



Source: Bloomberg, Recurrent research, public filings; Notes: Stock performance reflects the S&P 1500 Coal Index. OCF figures reflect Peabody, Alpha Natural, Arch, Patriot, Consol until 2018 and CEIX thereafter, Natural Resource, Alliance Resouce, Massey.

The belief in an emerging market-driven "coal supercycle" was widely held by executives in the industry, **reflected in some of the most aggressive patterns of reinvestment and equity raising within the energy sector.** The market's response was resounding – **700% outperformance reversed completely from 2010 through 2014**, with the sector almost entirely bankrupt by 2016. As late as 2011, major coal players were using debt to acquire one another (Peabody-Macarthur, Alpha Natural-Massey).

Big Tech is the seeming counterexample that actually supports our cash returns argument. After years of heavy spending from 2008-16 drove in-line performance vs. the S&P 500, Tech's pivot to lower capex and more cash returns drove dramatic outperformance beginning in 2017



Source: Bloomberg, Recurrent research, public filings; Notes: Stock performance reflects the S&P 500 Tech Index. OCF figures reflect Facebook, Apple, Microsoft, Amazon, Google, Netflix, Tesla.

As shown above, the narrative of "Tech dominance" which drives today's market is a relatively new phenomenon. Indeed, during 2008-16, we see that the blue bars show a relatively high rate of reinvestment by "Big Tech" players, as Facebook, Microsoft, Amazon, Google, Netflix and to a lesser extent spent massive sums to create unique platforms and establish effective monopolies in their lines of business. Accordingly, during this massive buildout, tech stock returns were fairly pedestrian and in-line with the S&P 500 from 2004-2016.

Once these massive capital outlays were completed, tech companies moved to return consistent amounts of cash to shareholders, with cash returns reaching 50% of OCF in 2018-19, as stock returns went hyperbolic.

Midstream is moving into a new era, where returns are driven by cash returns and shrewd capital allocation, not "growth for growth's sake"

As we noted in our previous white papers, a decade of aggressive growth capital projects left the midstream industry with two challenges:

1. Too many projects at the same time leading to too much "fallow capital"; and therefore
2. Too much debt

A period of aggressive growth spending can be overcome if the outsized spending is rapidly converted to cash flow. Since midstream companies pursued a high growth strategy for a decade, "cash flow harvesting" always seemed to be deferred into the future, and equity valuations compressed.

Today, Covid is accelerating the transition into "cash flow harvesting," and counterintuitively, this is a good thing for midstream shareholders. The increase in free cash flow will enable midstream companies to both pay down debt and increase ROICs at the same time, which we believe will be a very powerful combination, and sets midstream up to join other sectors – tobacco, refining, and even tech – whose shareholders have benefitted immensely (in the form of absolute cash returns and relative returns compared to the broad equity market) from this pivot.